

CALIFORNIA AND WESTERN MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION

VOL. 53

AUGUST, 1940

NO. 2

California and Western Medicine

Owned and Published by the

CALIFORNIA MEDICAL ASSOCIATION

Four Fifty Sutter, Room 2004, San Francisco, Phone DOuglas 0062

Address editorial, business, and advertising communications to Dr. George H. Kress as per address above.

EDITOR GEORGE H. KRESS

Committee on Publications

A. A. Alexander Oakland 1941

Francis E. Toomey San Diego 1942

G. W. Walker Fresno 1943

Secretary-Editor, ex officio

Advertisements.—The Journal is published on the seventh of the month. Advertising copy must be received not later than the fifteenth of the month preceding issue. Advertising rates will be sent on request.

BUSINESS MANAGER GEORGE H. KRESS

Advertising Representative for Northern California

L. J. FLYNN, 544 Market Street, San Francisco (DOuglas 0577)

Copyright, 1940, by the California Medical Association

Subscription prices, \$5 (\$6 for foreign countries); single copies, 50 cents.

Volumes begin with the first of January and the first of July. Subscriptions may commence at any time.

Change of Address.—Request for change of address should give both the old and the new address. No change in any address on the mailing list will be made until such change is requested by county secretaries or by the member concerned.

Responsibility for Statements and Conclusions in Original Articles.—Authors are responsible for all statements, conclusions and methods of presenting their subjects. These may or may not be in harmony with the views of the editorial staff. It is aimed to permit authors to have as wide latitude as the general policy of the Journal and the demands on its space may permit. The right to reduce or reject any article is always reserved.

Contributions—Exclusive Publication.—Articles are accepted for publication on condition that they are contributed solely to this Journal. New copy must be sent to the editorial office not later than the fifteenth day of the month preceding the date of publication.

Contributions—Length of Articles: Extra Costs.—Original articles should not exceed three and one-half pages in length. Authors who wish articles of greater length printed must pay extra costs involved. Illustrations in excess of amount allowed by the Council are also extra.

Leaflet Regarding Rules of Publication.—CALIFORNIA AND WESTERN MEDICINE has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this Journal write to its office requesting a copy of this leaflet.

DEPARTMENT INDEX

(Itemized Index of Articles is printed on Front Cover)

| | PAGE |
|--|------|
| Editorials | 53 |
| Editorial Comment | 57 |
| Original Articles | 59 |
| Clinical Notes and Case Reports | 82 |
| California Medical Association | 86 |
| Committee on Medical Preparedness | 86 |
| Council Minutes | 87 |
| Committee on Public Health Education | 89 |
| Committee on Public Relations | 90 |
| Committee on Postgraduate Activities | 92 |
| California Physicians' Service | 93 |
| County Societies | 93 |
| Woman's Auxiliary | 94 |
| News | 96 |
| Letters | 100 |
| Medical Jurisprudence | 103 |
| Twenty-Five Years Ago; State Examining Board | 104 |
| Index to Advertisements Adv. p. 8 | |

EDITORIALS†

MORE CONCERNING MEDICAL MOBILIZATION: COÖPERATION IMPORTANT

Appointment of a National Committee on Medical Preparedness.—At the meeting held on June 29, the Council appointed its chairman, Dr. Philip K. Gilman of San Francisco, to represent the California Medical Association in carrying through plans for medical preparedness now being formulated for the United States. Last month, on page 1 of the OFFICIAL JOURNAL, comment was made on the importance of such proper planning, if the Army, Navy, and aviation forces of our country are to be developed and maintained in highest efficiency.

The American Medical Association on June 11, in annual session at New York, through its House of Delegates, authorized the appointment of a national Committee on Medical Preparedness, consisting of ten elected and five ex-officio members to establish and maintain contact and suitable relationship with all governmental agencies concerned with the prevention of disease and the care of the sick, in both civil and military aspects, so as to make available at the earliest possible moment every facility that the American Medical Association can offer for the health and safety of the American people and the maintenance of American democracy.

Dr. Charles A. Dukes of Oakland, past president of the California Medical Association, was honored by election to this important national committee; and on July 19 he flew to Chicago to attend the organization meeting of the committee and to make a progress report for California.

Doctor Philip K. Gilman, as chairman of the California Committee on Medical Preparedness, in coöperation with the district councilors, has appointed a representative for each of the county medical societies, a list of which appears in this issue (on page 86).

* * *

Questionnaire Blanks Should Be Forwarded at Once.—A questionnaire blank has been sent by the American Medical Association committee to every physician in the United States. The organized medical profession of the United States can only make good its promise of whole-hearted, 100 per cent coöperation with the military and other authorities of the United States if physicians every-

† Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column which follows.

where forward to the American Medical Association office, and at an early date, the questionnaire blanks, properly filled in. In requesting such co-operation the national, state, and local Committees on Medical Preparedness seek only to obtain accurate data that will permit the Government to meet to best advantage its military and civil responsibilities in medical care, should certain emergencies arise. Physicians who are tempted to procrastinate or waive these matters aside may well keep in mind that in a real emergency the Government is all-powerful, and that a record of noncooperation may then be credited with a demerit rather than merit card. Therefore, the California Committee on Medical Preparedness urges members of the California Medical Association to forward the questionnaire blanks as promptly as possible, addressing the same to: American Medical Association Committee on Medical Preparedness, 535 North Dearborn Street, Chicago, Illinois.

* * *

State of California Medical Examining Boards.—Not to be confused with the activities which the American Medical Association is carrying on in efforts to aid the Federal military services, are those being conducted by the Adjutant General of the State of California, in coöperation with the Committee of Fifty appointed by Governor Culbert Olson. Charles A. Dukes, M. D., of Oakland, was honored by appointment on this committee, which has the name "California State Council of Defense."*

In the tentative plan, the State was divided into nineteen districts, each district to have a local medical examining board composed of seven members, as follows: a surgeon; an internist; an eye, ear, nose, and throat specialist; an orthopedist; a neuro-psychiatrist; a radiologist; a dentist.

The district headquarters will be in the following cities, except that San Francisco will have two, and Los Angeles, six districts: Eureka (1); Redding (1); Sacramento (1); Oakland (1); Napa (1); Stockton (1); San Francisco (2); San Jose (1); Fresno (1); Salinas (1); San Diego (1); Los Angeles (district) (6); Riverside (1).

The district councilors of the California Medical Association and the presidents of the county medical societies have been requested to coöperate in the selection of the personnel for the examining boards. The tentative list of counties composing the various districts is given in this issue, on page 87.

"INDEMNITY DEFENSE FUND" OF THE CALIFORNIA MEDICAL ASSOCIATION

Origin of the California Indemnity Defense Fund.—Some twenty-four years ago, on May 20, 1916, the Council of the California Medical Association adopted a resolution whereby "a separate fund, to be known as an 'Indemnity Malpractice Fund,' came into being, intended to provide, as one of its purposes, "the payment of malpractice indemnity judgments and settlements"; the fund "to be raised through voluntary assessment of \$15 yearly for at least two years," and "to give indemnity protection to only those who enter

therein." In accordance therewith, rules and regulations covering the administration of the "Indemnity Defense Fund of the Contributing Members of the Medical Society of the State of California" (the name at that time of the California Medical Association) were adopted; three trustees—Lemuel P. Adams of Oakland, the late A. S. Lobingier of Los Angeles, and the late William Ellery Briggs of Sacramento—being elected to carry on the work. Other trustees included the late Rea Smith of Los Angeles, the late William Duffield of Los Angeles, Howard Morrow of San Francisco, J. B. Harris of Sacramento, and Karl L. Schaupp of San Francisco. Dr. Lemuel P. Adams has been a trustee from the beginning.

* * *

Discontinuance of the Organization.—The Fund carried on its work for several years, but an increasing number of malpractice suits (the first wave of what might be termed the existing malpractice sport engaged in by certain persons) led the House of Delegates of the California Medical Association, on June 23, 1923, to pass "a resolution, unanimously adopted: *Resolved*, That the Indemnity Defense Fund be discontinued" . . . ; with a further provision that each member of the Fund be notified. The action taken was printed in the *California State Journal of Medicine* (former name of CALIFORNIA AND WESTERN MEDICINE) in the issue of August, 1923 (on pages 344, 351, 434, and 484).

On June 30, 1924, the other legal protection carried on at that time by the State Medical Association, known as "optional" medical defense (which came into existence on May 17, 1922, to take the place of prior medical defense maintained by the State Association), was likewise terminated.

The physicians who voluntarily joined the Indemnity Defense Fund received, for the money paid by them, a comparatively large return of protection—at least when judged by the cost of present-day malpractice defense premiums. The majority of members in 1931 assigned their residual interests in the Fund to the nonprofit corporation, the "Trustees Of The California Medical Association," which body, by recent action of the Council, has assumed custodial care of the Indemnity Defense Fund.

* * *

Proposed Termination of the Fund.—In order to be in position to terminate the Indemnity Defense Fund, the Council last year authorized the purchase of a certificate of insurance from Lloyd's of London for a period of five years, from January 15, 1940; and on June 29 last, the Council further ratified procedures for the proper distribution of the Fund, in which at the present time the nonprofit corporation, or holding company of the California Medical Association, the "Trustees Of The California Medical Association," has the major interest. These comments are made, not only for the information of present members of the State Association, but particularly for those of the Indemnity Defense Fund who, in 1931, failed to assign their respective interests, and who will shortly receive further information on the subject.

* Additional comment on page 87.

MEDICAL EXHIBITS AT GOLDEN GATE EXPOSITION: HERZSTEIN BEQUEST

How the Herzstein Bequest Has Been of Aid. When the Golden Gate International Exposition opened its doors last year, one of the most interesting exhibits there displayed was that devised by the Cancer Commission of the California Medical Association, and located in the Science Building. Its cost and maintenance were covered by income from a bequest to the Association, made by the late Morris Herzstein of San Francisco, whose death occurred on October 27, 1927, and whose will contained the following provision:*

"First, I give to the Union Trust Company, a Corporation doing business in the city of San Francisco, State of California, the sum of Twenty thousand dollars (\$20,000), but in trust to hold and invest in first-class nontaxable securities and to yearly pay the net income from said securities to the State Medical Society of California, to be used only by this Society in taking such steps as the Society may consider best for the suppression of quackery in the practice of medicine within the State of California."

When the Fair was again opened this year, the Cancer Exhibit was reinstalled. Recently, educational literature concerning cancer has also been made available in the booth; so that citizens who visit the exhibit are now able to carry away printed reminders of the information delineated in the exhibit charts.

During the last month an equally interesting and very attractive exhibit, entitled "The Human Eye," and sponsored by physicians and associated optical groups of the Bay region, has been placed in the Science Building. For additional information concerning this display, readers are referred to the illustrated description to be found in this issue of CALIFORNIA AND WESTERN MEDICINE (page 91).

Mention should be made also of the excellent medical exhibits of the University of California, of the Pacific Coast Roentgen Society, the California Tuberculosis Association, the California State Board of Public Health, the Western Urological Association, and other organizations.

* * *

Medical Exhibits Should Be Salvaged for Future Use at California State and County Fairs.—Such is the high quality of these exhibits that it is to be hoped that it may be possible to salvage at least a portion of them for future continued use in the state and county fairs of California; especially since there exist few superior agencies for the dissemination of medical facts to the public than the many fairs annually held in California. The State Fair at Sacramento and the Los Angeles County Fair at Pomona, each have an annual attendance of about 500,000 persons, and fairs of other counties are attended by keenly observing persons in proportion. In this connection note may be made concerning the efforts of the Western Branch of the American Public Health Association through a committee of which Guy S. Millberry, D.D.S., is chairman, to develop a plan

for a public health museum building to be erected in San Francisco.

Why not avail ourselves, then, of these excellent opportunities for public health education? With a moderate expenditure of funds, many of the medical-exhibit panels in the Science Building at Treasure Island in San Francisco could be made of inestimable service for years to come. What worthier use, indeed, of Herzstein Bequest funds could be presented than in salvaging some of the above exhibits for such an objective?

PLANS FOR 1941 ANNUAL SESSION AT DEL MONTE

Coöperation of Essayists and Others Requested.—Because events follow in such rapid sequence, it may be in order to remind members of the California Medical Association that those who would take part in the annual session of next year, to be held at Hotel Del Monte, May 5-8 inclusive (Monday-Thursday), may well begin the formulation of their plans now.

Prospective essayists, in particular, should communicate with the secretary of the scientific section before which it is desired to present a paper. The roster of section officers appears in each issue of CALIFORNIA AND WESTERN MEDICINE, on advertising page 6. Or, if a scientific exhibit is contemplated, these summer months may offer special opportunities for needed preparation.

* * *

Council Approves Reallocation of Meeting Arrangements.—It should be of interest to members that the recommendations of the California Medical Association Committee on Scientific Work, regarding basic arrangements in program allocations, have been approved by the Council. In accordance therewith, at Del Monte in 1941, the morning meetings will be given over to general sessions, and the allocation for Tuesday afternoon entertainment will be discontinued, thus permitting scientific sections to hold meetings on each of the four afternoons. Medical and surgical films will be presented in one of the larger meeting rooms during the mornings, according to scheduled announcements, so that members who wish to see certain films may arrange their program. Owing to the limited number of rooms available for meetings, the Council has announced that it will be necessary for all affiliated societies and activities to hold their meetings on the Saturday and Sunday preceding the annual session, or on the Thursday afternoon of the session.

The management of the Hotel Del Monte contemplate certain construction changes that should aid greatly in making this meeting place more popular than ever to the members of the California Medical Association, and it is to be hoped these improvements will be made. Reservations will be in charge of the Hotel Del Monte, and inquiries or requests for the same should be sent to Hotel Del Monte, Del Monte, California.

* Excerpt from will of Morris Herzstein, Superior Court Case 48,446.

ENACTMENT OF CALIFORNIA LAWS THROUGH INITIATIVE PETITION

Recital of Past Experiences with Legislation on Medical and Public Health Measures.—Enactment of statutes by vote of the electorate is nothing new to physician-citizens of California, because, since the adoption of the constitutional amendment that brought the California initiative and referendum into being at the state election of October 10, 1911, organized medicine has found it necessary, in its efforts to protect the public health, to give hard battle on a number of proposed laws related to medical and public health functions.

Thus, at the state election of 1920 a proposed "constitutional amendment" that would have "prohibited compulsory vaccination" was defeated by a vote of 468,000 to 359,000.*

Concerning "statutes" submitted through initiative petitions, a proposed law "to license drugless physicians," and placed on the ballot in 1914, three years after the adoption of the initiative in California, went down to defeat by a vote of 462,000 against, to 223,000 for.

In 1920, an effort "to create a board of chiropractic examiners" was lost, the vote being 402,000 against, and 390,000 for the measure.

However, two years later, in 1922, a different story was recorded, for then the osteopathic and chiropractic groups joined forces, each submitting a separate act, and each coming out victorious. The total vote "to create a board of chiropractic examiners" was 481,000 in favor, and the against votes numbered 327,000; while "to create a board of osteopathic examiners" the total vote in favor was 439,000, and the ballots against totaled 327,000. But in 1934, when the chiropractors sought to "amend" their frozen law, the vote "against" was 1,082,000, with 662,000 ballots in favor. And in 1939 the second attempt to "amend" was likewise lost, this time on a vote of 801,000 in favor, with 1,895,000 votes against.

Also, in the year 1934, the naturopathic group sought an initiative "to license naturopaths"; the ballots in favor numbering 492,000, with 1,115,000 votes against.

Three efforts have been made by antivivisection proponents to secure the enactment of statutes through initiative action, as follows:

| Year | Vote (in favor) | Vote (against) |
|------------|-----------------|----------------|
| 1920 | 272,000 | 527,000 |
| 1922 | 226,000 | 514,000 |
| 1938 | 721,000 | 1,581,000 |

When the next attempt will be made to use California as an antivivisection guinea pig is not known, but it is quite probable that, in good time, another effort to have such a law passed will become manifest, since the proponents of that measure seem amply supplied with funds.

The illuminating figures, given above, should bring back to physicians who took part in the various battles a host of remembrances. The further fact that so many measures related to public health

interests have been proposed for enactment through initiative vote of the electorate, combined with the heavy expenditures initiative voting involves, should make the subject of more than ordinary interest to both medical men and women and other citizens.

* * *

Important Items in Initiative Procedures.—It must not be forgotten that the number of signatures required to validate an initiative petition is variable, being a percentage of the total votes cast for a governor at the last prior gubernatorial election. At the present time a total of 212,000 valid signatures is required.

The "signatures may be solicited for a petition by any qualified elector of the county in which the petition is circulated. The person obtaining signatures is required to make an affidavit 'stating his own qualifications, and that the signatures to the attached section (of the petition) were made in his presence, and to the best of his knowledge and belief each signature to the section is the genuine signature of the person whose name it appears to be.'"

It is important to remember that the date and address following the signature must be in the same handwriting. Experience has shown that it is usually necessary "to obtain at least one-third more signatures than the minimum so as to allow for errors and challenges of the validity of the signatures." Signature solicitors usually charge ten cents or more per name.

Any organization raising or spending more than \$1,000 in a campaign on measures submitted to the people through initiative must file a report through the Secretary of State.

* * *

Basic Science Law Must Not Be "Frozen."—Note may be made that the phraseology of the chiropractic statute, enacted through initiative in 1922, makes it a "frozen" law; that is, the statute can only be amended through another initiative vote. The osteopathic law of the same year is not frozen, because it contains a provision whereby changes may be made through amendments by the California Legislature to the Medical Practice Act of the state! In this connection, the following may be kept in mind:

The constitutional provision that initiative acts may be amended or repealed only by vote of the people gives the acts approved in this way special protections which make them something akin to constitutional amendments in effect.

Nevertheless, the Constitution also makes it possible to include in the Act a provision allowing amendment by the Legislature. Sponsors of several initiatives have taken advantage of this opportunity to allow for flexibility in the statute.

These comments are presented because there has been so much discussion in recent years concerning the submittal of a basic science law through initiative petition. If such a measure is submitted, it may be well to provide for possible modification in the future, through inclusion of a provision for amendments by action of the California Legislature, using the Medical Practice Act as the means to prevent a frozen basic science law.

* Figures given in these comments are correct as to thousands.

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 86.

EDITORIAL COMMENT†

ANTITOXIN ACTION OF IRON SALTS

The success of iron in the treatment of certain types of anemia has stimulated the hope that iron salts might be equally effective in increasing the normal resistance to bacterial infections. That this hope may eventually be realized is currently alleged by Hettche¹ of the Hygienic Institute, University of Munich, who found that, with proper subcutaneous doses of iron-manganese mixtures, laboratory animals may be rendered refractory to multiple lethal doses of at least three specific bacterial toxins.

The first definite immunological success of iron therapy was reported about three years ago by Wohlfeil,² of the Robert Koch Institute, Berlin. He found that subcutaneous injections of ferro-ammonium-sulphate often protect guinea pigs against minimal lethal doses of diphtheria toxin, and that this protective action can be increased by the simultaneous injection of magnesium or copper salts, which he pictured acting as iron "activators."

Hettche, and his coworkers,³ have not only confirmed this finding, but have extended the tests to include other animal species and to other bacterial toxins. They find that iron therapy has prophylactic or antitoxic value if given parenterally, but is without antitoxic action if given by mouth. They emphasize the fact that optimum doses must be used, excessive doses being relatively ineffective. In their hands local toxic reactions may be reduced by selecting ascorbic acid salts of iron, *e. g.*, "ceferro." A mixture of "ceferro" and $MnSO_4$ allegedly has not only a prophylactic action against diphtheria, tetanus and botulinus toxins, but is also therapeutically effective, protecting laboratory animals against previous injections of multilethal doses of these toxins.

The German hygienists do not suggest the substitution of parenteral iron therapy for present methods of specific treatment or prophylaxis. They are of the opinion, however, that it will be found to be a valuable adjunct to such methods. Theoretically, the reported antitoxic action of iron salts is explained on the assumption that "activated" iron increases the respiratory enzymes in reticulo-endothelial cells, and in other cells responsible for specific antitoxin production.

† This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comments by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

¹ Hettche, H. O., *Zeitschr. f. Immunitätsforsch.*, 97:81, (Nov.), 1939.

² Wohlfeil, T., *Zentralb. f. Bakt.*, 139:27, 1937.

³ Hettche, H. O., and Strassburger, H., *Zeitschr. f. Immunitätsforsch.*, 97:109, (Dec.) 1939.

Parenteral administration of iron is not viewed with favor by most American pharmacologists. Injection of small amounts of iron salts is very painful, and therapeutically ineffective in iron deficiency anemias; and larger doses produce severe toxic reactions. The assertion that "ceferro" is relatively nontoxic needs confirmation. The hypothetical increase in reticulo-endothelial enzymes would be of basic theoretical interest, if supported by adequate chemical evidence.

P. O. Box 51.

W. H. MANWARING,
Stanford University.

BETTER CLINICAL RESULTS WITH THE SULFONAMIDE PREPARATIONS IN GONORRHEAL URETHRITIS

This article is primarily written for the purpose of decreasing the number of failures caused by sulfanilamide, and its related compounds, in the treatment of gonorrheal male urethritis.

When, how, and why to use a certain preparation of sulfanilamide is very important toward establishing a cure for gonococcal infections. Naturally, our first thought would be to choose a drug whose toxicity is so low and its therapeutic index so high that the patient can tolerate a complete course of treatment orally without any alarming systemic effects.

Consequently, the ideal chemotherapeutic agent would be one which can reduce the amount of urethral discharge, give a negative smear, and produce a clear urine in the first and second glass test. Should this particular chosen drug produce mild toxic systemic reactions, although it has benefited the local condition, the dose should be decreased to meet the patient's tolerance. If a physical breakdown occurs due to a serious complication, such as hemolytic anemia, agranulocytosis, or acute hepatitis, stop the drug immediately and depend entirely upon local treatment for a cure. Likewise, if a drug can be well tolerated systemically, and there is no improvement at the site of infection, the drug is useless and should be discontinued in favor of local treatment.

To be more specific, if a patient does not respond after one week's oral treatment with sulfanilamide, spare the patient's pocketbook and protect his defensive mechanism by discontinuing the drug. Use local treatment, as a mild silver protein preparation, for about two weeks and then resume oral treatment with a different brand of sulfonamide, as neoprontosil, sulfapyridine, uliron sodium, etc.

Usually the patient will respond to some degree on such a régime; should he not, however, show any improvement to a second course of a different oral preparation, begin to build up the patient's resistance to the gonococcus. This can be accomplished by mild local treatment and general systemic improvement with the vitamins, liver and iron preparations, good nutritious food, bland diet, and avoidance of extreme physical exertion.

In conclusion, one must bear in mind that even a procedure such as is outlined above will in some cases produce no results. Consequently, we must

employ anteroposterior urethroscopy for foci of infections involving the urethral follicles and crypts, prostatic ducts, strictures, seminal vesicals and the prostate. Should such a method of examination fail to establish a cure, our last and final resort is hyperpyrexia.

The tests* to determine the curability of gonorrheal urethritis are the passage of a sound, prostatic massage, centrifuged morning specimen of urine, the complement-fixation test, and culture.

The importance of this system of treatment will be stressed in a paper to be published at a future date, comprising the results of two hundred cases of acute gonorrheal urethritis treated with sulfanilamide, neoprontosil, sulfapyridine, and uliron sodium.

453 Flood Building.

HERMAN FEINBERG,
San Francisco.

POTENTIATED PAN-INFLUENZA VACCINE

Horsfall and Lennette,¹ of the International Health Laboratories, New York, report the discovery of a "duplex" vaccine equally effective against all types of influenza virus. The new synergic vaccine is a basic challenge to immunologic theorists, and may eventually lead to effective clinical mastery of this disease.

During the course of certain experiments, four presumably normal ferrets were inoculated intranasally by the New York investigators with multiple doses of their 1939 strain of the influenza virus. All four developed typical symptoms of experimental influenza. During convalescence, however, they began to manifest evidence of a secondary, distemper-like infection, from which one died and the remaining three were killed on the eleventh day. To prevent the possible spread of the epizootic to the normal ferret colony, a formalized vaccine was prepared from the lungs and spleens of these four animals and two cubic centimeters of the 1:1000 formaldehyd extract injected subcutaneously into each of the 157 normal ferrets. Such formalized vaccines had been found effective in preventing the spread of distemper on previous occasions.

Two days after giving this formalized vaccine, three groups of vaccinated normal ferrets were inoculated intranasally with 1,000 infectious units of three antigenically different² strains of the influenza virus. To their surprise none of these vaccinated ferrets developed influenza. Serum drawn from control vaccinated ferrets neutralized all three strains of influenza virus in high dilution. (Ferret serum is normally nonvirucidal.) These findings suggested that the formalized distemper vaccine had, in some wholly unexpected way, actively immunized the ferrets against at least three antigenically different strains of the influenza virus. At the same time the vaccine had rendered the ferrets relatively immune to canine distemper.

* Feinberg, Herman: Tests to Determine the Curability of Gonorrheal Urethritis, Calif. and West. Med., 46:6 (Jan.), 1937.

¹ Horsfall, Frank L., Jr., and Lennette, Edwin H., Science, 91:492, (May 2), 1940.

² Horsfall, Frank L., Jr., and Lennette, Edwin H., J. Bact., 39:56, 1940.

In order to reproduce this pan-immunizing vaccine, formalized vaccines were prepared from normal ferrets infected with influenza virus, or with distemper virus. The two vaccines, mixed *in vitro*, failed to stimulate the development of an active influenza immunity. In a second attempt, ferrets were inoculated simultaneously with influenza and distemper virus, and formalized vaccines prepared from their doubly infected lungs and spleens. Most of the duplex vaccines thus prepared proved to be ineffective. By varying the dosage and time interval between injections, however, a number of fairly effective synergic vaccines were eventually prepared. Because of the number of variables in the production of such synergic vaccines, much more work will have to be done before successful "binomial" vaccines can be regularly reproduced.

No theory of virus or antigenic potentiation has thus far been suggested by the New York investigators to account for their observed results. The work is of basic clinical interest, however, since it suggests that an effective pan-immunizing influenza vaccine is theoretically possible. If this hope is realized, the observations of Horsfall and Lennette may eventually be recorded as the most important basic medical discovery of the present generation.

P. O. Box 51.

W. H. MANWARING,
Stanford University.

DEATH FROM SULFANILAMIDE: A CALIFORNIA COURT DECISION

Physicians and a clinic were absolved from liability for a death due to sulfanilamide, and a precedent was established by a medical legal opinion given on January 10, 1940 by Superior Court Judge Clement L. Shinn in Los Angeles.

A white male patient, suffering from an acute specific infection, was treated with sulfanilamide at a venereal disease clinic for a period of five weeks. Subsequently he developed complications from the use of the drug and died. A malpractice suit was instituted against the physicians and the clinic, and following is the opinion of the Court:

This young man was being given a dangerous drug. He was not being treated for a consideration; he was being treated for his own good by an experienced doctor—a man who appears to me to be a competent and conscientious man. There are, of course, recognized and unavoidable dangers in certain types of treatment, and physicians as a rule do their utmost to minimize these dangers. The medical profession has to progress, not for its own good, but for the good of humanity, and types of treatment which are efficacious cannot be abandoned because they are not utterly safe. Accidents will happen. Here was a young man who fell in that indeterminable class who cannot tolerate or handle this drug in considerable quantities. It does not appear that there was any way for the medical profession to tell who could or could not handle the drug except by using it and watching the results; and when they tried it out on this patient they were not doing wrong by him. If they had been successful, it would have changed his entire life. He certainly was leading a miserable existence the way it was. He had had other treatment. It may be that this remedy was the only one that would have reached his case. We don't know about that. He did what appeared to be the right thing in going to the clinic and submitting to the treatment. The drug was not given in excessive quantities. The young man was given printed

instructions, advising him to watch for certain enumerated manifestations of ill effects. These instructions had been carefully prepared by competent authorities, and listed the unfavorable reactions that were known at that time. He was instructed to report to the doctor immediately upon the discovery of any of these symptoms, and he was an intelligent young man. Once a week he was examined, and tests which were generally used by the profession at that time were made. No evidence of unfavorable reaction occurred until the end of the fifth week, at which time the treatment was stopped. It appears from the evidence that the treatment was administered scientifically and carefully, and that the results which followed could not have been anticipated. The treatment was proper under all of the circumstances. The unfortunate consequence was not the result of negligence.

Judgment will be for the defendants.
State Building.

MALCOLM H. MERRILL,
San Francisco.

Knowledge of disease has now advanced so far that it is very often desirable to treat the patient before he knows that he is sick. People stricken with acute disease hasten to their doctor for aid. Those suffering from a chronic disease of insidious onset tend to put off their visit to a doctor and to seek relief by self-treatment. Yet we know that, in many diseases, the best hope for cure depends on early treatment, treatment even before the symptoms appear. This is not only true of tuberculosis, but of several other diseases, including the two at the top of the list of causes of death, cancer and heart disease. It is true of diabetes, of many cases of syphilis, and of certain kidney diseases which though so slight as to be overlooked may cause high blood pressure later on. An attempt has been made by the American Medical Association to adjust the private practice of medicine to this situation, but periodic medical examinations have not been widely accepted.—J. Rosslyn Earp, M. D., *Health News*, May, 1940.

Two American Physicians Are Honored by Special Postage Stamp Issue.—The benevolent character of the service which physicians give to suffering humanity is typified by the general practitioner of medicine and the army medical officer thus memorialized, *The Journal of the American Medical Association* says, in commenting on an announcement by the Post Office Department that the late Major Walter Reed, M. D., of the Army Medical Corps, and Crawford W. Long, M. D., of Georgia, will be among those honored in a famous American series of postage stamps to be issued soon.

"Although other names might well have been added to this brief list, no one will deny that the two selected fully merit this honor," *The Journal* says. "Our Eastern shores and many of our cities were invaded some ninety-five times by yellow fever before Doctors Reed, Carroll, Agramonte, and Lazear conducted experiments in Cuba which demonstrated that yellow fever is transmitted by the bites of certain species of mosquitoes. Yellow fever had been present in the Western Hemisphere for at least three hundred years and had caused tens of thousands of deaths. Following this discovery by Walter Reed and his associates in 1900, yellow fever soon disappeared from North America and has never returned. Dr. Crawford W. Long, a general practitioner of medicine, on March 30, 1842, first used sulfuric ether as an anesthetic during the performance of a surgical operation. Doctor Long performed this operation on James M. Venable in Jefferson, Jackson County, Georgia, a small town then many miles from a railroad."

The Journal called attention last year to the disparity between the number of physicians in other countries who had been honored by special issues of postage stamps and the number so honored in the United States.

ORIGINAL ARTICLES

GAS CHANGES IN MATERNAL AND FETAL BLOOD DURING CYCLOPROPANE OBSTETRIC ANESTHESIA*

By E. A. ROVENSTINE, M. D.

JOHN ADRIANI, M. D.

AND

W. E. STUDDIFORD, M. D.

New York, N. Y.

MORE than ninety-three years have passed since the first obstetric anesthesia. During all of this time there has been a constant search for the ideal anesthetic, or analgesic drug, to relieve pain associated with childbirth. The lack of agreement in the voluminous literature that has been accumulated on the subject is evidence that the search must go on.

In nearly a century of experimenting, many drugs have been recommended enthusiastically and many unwarranted claims have been made, but no drug is definitely established today as being superior to all others. In fact, it is not unreasonable to cast considerable doubt on any claim that there is a safer drug available than ether, which Simpson gave during the first obstetric delivery with anesthesia.

Other surgical procedures have been more fortunate in so far as efforts to improve anesthesia for their more satisfactory and convenient completion are concerned. But it is not strange that obstetric anesthesia has not kept pace with other advances in the specialty. The obstetrical patient presents certain problems that are apart from those of surgery in general. Firstly, there are the lives of two individuals to be considered when anesthetic drugs are administered during childbirth. This, in itself, would not be greatly significant were it not true that in one of them the physiological relationships are not only decidedly different, but are poorly defined. Secondly, the physiology of the pregnant uterus is readily influenced by drugs administered to relieve the pains associated with its contractions. Thirdly, physiological variations from the normal female are always encountered to complicate the whole procedure.

When maternal welfare is placed above that of a nonviable fetus, no more perplexing problems are presented than are regularly encountered with surgical anesthesia. Fortunately, these cases are rare. Most often the efforts at maternal pain relief must be made with the more important consideration of delivering an uninjured fetus.

All drugs producing analgesia or anesthesia must, in some way, alter or interrupt the processes of cell metabolism. This alteration, if carried out to a certain degree, results in irreversible cell activity. Therefore, no drug for this purpose falls without the classification of a protoplasmic poison.

* Read before the joint meeting of the sections on Anesthesiology and Obstetrics and Gynecology of the California Medical Association at the sixty-ninth annual session, Coronado, May 6-9, 1940.

From the Division of Surgery, Departments of Anesthesia, and Obstetrics and Gynecology, New York University College of Medicine, New York, N. Y.

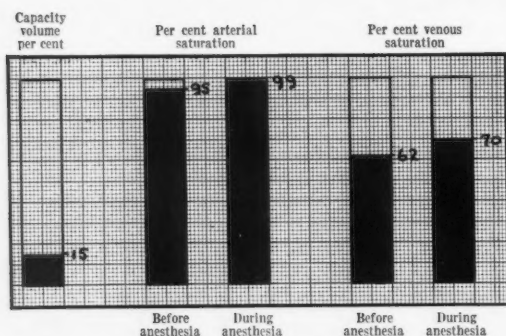


Fig. 1.—Maternal blood oxygen.

Drug poisoning is, of course, both quantitative and qualitative, depending upon the drug and the cell. Drugs given to pregnant women are being exposed to two types of cells: the maternal, which may react in one way, and the fetal, which may react differently. At the present time there is considerable speculation in explaining drug action on the maternal cell. There is scarcely enough evidence even to speculate on the action of drugs on the cells of the fetus.

New drugs and new methods, as they are introduced for obstetric anesthesia, gain popularity with certain individuals. Others may use them for want of something better or because of their convenience. No new drugs are employed because their pharmacological action is established as being safer or more desirable for both mother and fetus. The laboratory studies that might establish these criteria are not easily completed. The clinical observations, to which the final appeal must be made for any drug, lend themselves more readily to forming impressions than to accurate interpretations.

CYCLOPROPANE

Cyclopropane is one of the more recent drugs recommended for obstetric anesthesia. It was to be expected that this gas would be received enthusiastically, since it has many properties which suggest it might overcome certain objections to other agents in use. The potency of this gas was among the most important of these properties. Its administration may be carried out with very high oxygen dilution. Since no cause of neonatal death has been stressed more than asphyxia, the high oxygen in cyclopropane mixtures seemed very desirable. It has been determined that the fetus *in utero* is in a state of asphyxia. Whereas the arterial blood of the normal adult is saturated to about 95 per cent of its capacity, that of the fetus is often not more than half as well saturated. The fetus is also in a state of acidosis, with a high carbon dioxide tension in its blood.¹ Moreover, these biochemical differences from the adult are exaggerated in infants with asphyxia neonatorum. They are also augmented by anesthesia associated with low oxygen tensions, as is had with nitrous oxid-oxygen mixtures. These facts have made oxygen an urgent necessity in the prevention and treatment of fetal asphyxia. It was the logical inference that a small amount of cyclopropane, mixed with much oxygen,

would eliminate the danger of reducing the fetal blood oxygen during anesthesia.

The first clinical report of the use of cyclopropane in obstetrics was conservative in its claims, since it was realized that many experiments, long clinical trial, and much statistical data must accumulate to establish the merits of any drug.² A more generous endorsement followed the widespread use of cyclopropane throughout the country. However, cyclopropane has about passed through the early wave of enthusiasm, and it may be said to be now in the stage of critical evaluation and experimental investigation. Its proper place, however, in obstetrical anesthesia is yet to be determined. Years of accumulated information may be needed to establish that place.

There is considerable clinical and laboratory evidence accumulated to guide in the proper use of cyclopropane for the mother. It may be expected, in competent hands, to produce anesthesia even in the unpremedicated patient, rapidly and pleasantly when concentrations as low as 15 per cent are administered. The presence of respiratory infections need not give alarming concern, since their severity probably will not be increased with cyclopropane. The gas undergoes no change in the body and is eliminated almost entirely by the lungs. After a few minutes of anesthesia, the venous blood concentration of cyclopropane approaches the arterial. This average figure is 15 milligrams per 100 cubic centimeters during second-plane anesthesia. Complete body saturation does not occur at this time, but requires two or more hours. Desaturation requires a similar time, and most of the agent is eliminated in less than ten minutes with but traces in the blood for two hours. The rapid elimination permits rapid recovery and the return of normal reflex activity. The incidence of vomiting during cyclopropane anesthesia induction is less than with volatile agents. The gas does not stimulate respirations and respiratory arrest precedes circulatory paralysis. The effects of the drug upon the circulatory system are the subject of an important controversy. Cardiac arrhythmias are not uncommon and their etiologic mechanism is not established.

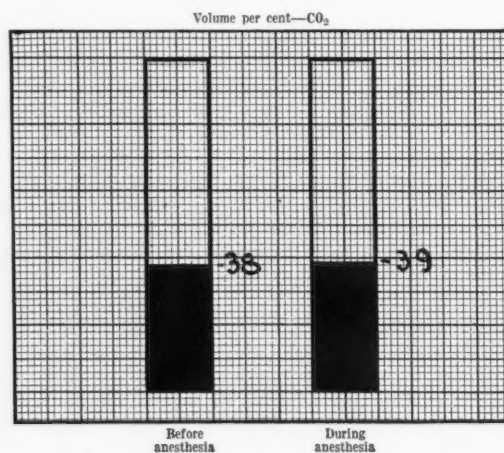


Fig. 2.—Maternal blood.

However, patients without serious pre-anesthetic arrhythmias need not be expected to develop them during cyclopropane anesthesia.

The effects of cyclopropane upon the liver of the pregnant woman are interesting, since even in the presence of toxemia the excretion of dyes used for liver function tests is unchanged by cyclopropane. Cyclopropane, in contradistinction to other inhalation anesthetic agents, does not alter the acid-base balance or decrease the p^H of the blood. The total base, the nonprotein nitrogen, the sugar and combining power of the blood are not changed by cyclopropane in the normal pregnant woman.

The effects of the drug upon the uterus have been carefully studied.³ The frequency and duration of uterine contractions are not affected by cyclopropane. The strength of contractions which are markedly reduced with ether and chloroform are unaffected by cyclopropane. The contribution of the abdominal muscles to the intra-uterine pressure is reduced with the gas or any other narcotic drug. The effective arterial pressure which irrigates the placenta is increased with cyclopropane, and other anesthetics. Clinical observations have suggested that light cyclopropane increases uterine tone, and that even though tone is decreased with deep anesthesia the uterus contracts rapidly and strongly during recovery.

The effects of cyclopropane upon the fetus cannot be set down with confidence. Laboratory studies are scarce, incomplete and difficult of interpretation. It is established that cyclopropane, like other narcotics and hypnotics, passes from the maternal to the fetal circulation. The changes from normal blood gas tensions that occur have been reported by Smith⁴ and studied here.

EXPERIMENTAL METHOD

The initial problem that required solution in this study was the selection of a convenient method for collecting blood samples containing cyclopropane. Because of the marked solubility of the gas in oil, the familiar methods could not be used. A simple syringe method of collecting blood anaerobically and storing it over mercury was devised by one of us (J. A.).⁵ This method was later adopted and used by Smith⁴ to carry out his work with cyclopropane.

All available types of obstetrical cases were studied. No pre-anesthetic medication was given.

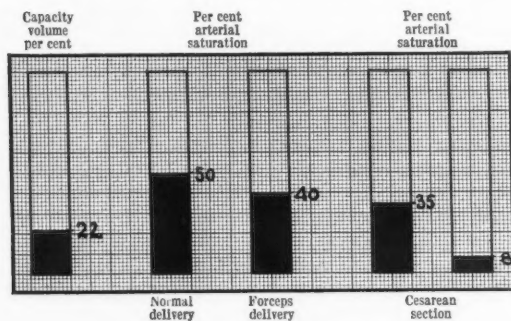


Fig. 3.—Fetal blood oxygen.

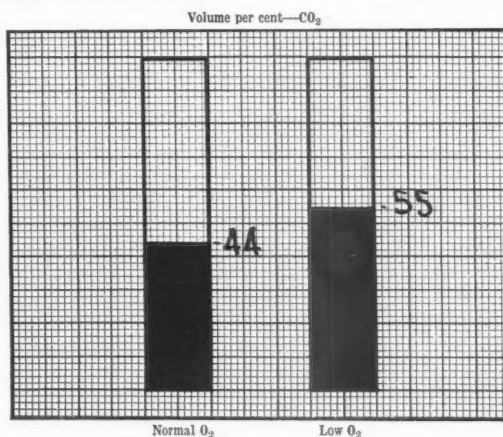


Fig. 4.—Fetal blood.

Anesthesia was administered by physicians specializing in anesthesia. The closed or carbon dioxide absorption technique was utilized. Induction was accomplished with the carbon dioxide absorber in use. A mixture of 25 per cent cyclopropane and 75 per cent oxygen was first administered. After anesthesia was established it was maintained in the second plane of the third stage. A pharyngeal airway was inserted when required. Before anesthesia was induced, a specimen of maternal blood was collected from the radial or brachial artery, or in some cases from an arm vein. Immediately after delivery two Kocher clamps were placed about two inches apart close to the baby. Simultaneously another pair were placed close to the vulva. By cutting between them, a segment of cord was obtained. Blood from the infant was always taken before the onset of respirations. Enough arterial blood was removed from the umbilical vein to permit analysis for total carbon dioxide, oxygen, and cyclopropane. At approximately the moment the cord was clamped another maternal arm specimen was obtained. At cesarean section a segment of cord was obtained as soon as the uterus was incised in the same manner as during normal deliveries. The blood was analyzed as soon as possible after collection. The total carbon dioxide and oxygen contents were determined by the standard technique on the constant volume manometric apparatus of Van Slyke and Niell. Cyclopropane was determined on the manometer by the method described by Orcutt and Waters.⁶ The oxygen capacity was determined by aerating 3 to 4 cubic centimeters of blood for fifteen minutes in a separatory funnel rotated at a high speed, and determining the total oxygen by the manometric method.

RESULTS

The cases studied include normal deliveries (6), forceps deliveries (12), and cesarean sections (18). The oxygen capacity of the maternal blood was found to be approximately the same in all patients, averaging 15 volumes per cent. The total carbon dioxide of the maternal arterial blood averaged 38 volumes per cent. There was an increase of 1 to 2 volumes per cent carbon dioxide in some patients,

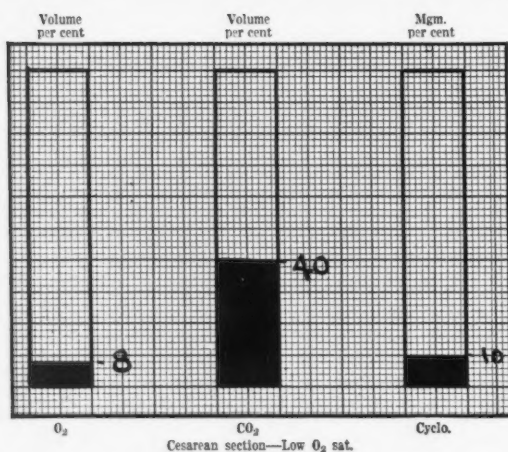


Fig. 5.—Fetal blood.

and a decrease of about one volume per cent in others during anesthesia.

The oxygen content of the venous blood varied widely (20 to 80 per cent saturation) before anesthesia. During anesthesia the venous blood oxygen saturation was always raised. The average for the series was 65 per cent saturation before and 70 per cent during anesthesia. The venous blood oxygen approached nearer the figure for arterial saturation in the cases with more prolonged anesthesia. It has been noted before that the difference in oxygen saturation of arterial and venous blood was less during cyclopropane than with other anesthetic mixtures. Although this phenomena has been explained on the basis of the high oxygen concentration given, it is quite likely that the action of cyclopropane is largely responsible. The gas may have an effect upon the contractile mechanism of capillaries. This same effect may account for the increased bleeding or oozing from cut surfaces that is often associated with cyclopropane anesthesia.

The oxygen content of the arterial blood of the mothers averaged 95 per cent saturation before anesthesia. There was a constant increase to 99

or 100 per cent saturation in all patients during anesthesia.

The oxygen capacity of the fetal blood was higher than the maternal. For all the cases it averaged 22 volumes per cent. This difference may be explained, partially at least, on the basis of the difference between maternal and fetal hemoglobin. The oxygen content of the fetal arterial blood varied with the type of delivery. In normal deliveries, the average was 11 volumes per cent or approximately 50 per cent saturation. This is slightly lower than the values given by Eastman for arterial blood of babies delivered from unanesthetized mothers. When delivery was accomplished with forceps and the anesthesia more prolonged (average 15 minutes), the oxygen content of the arterial fetal blood was lower, having as an average 40 per cent saturation. The studies made during cesarean sections had to be classified into two groups. In ten of these cases oxygenation approximated the values found in other deliveries averaging 35 per cent saturation. In the others the oxygen content was very low, amounting to only one volume per cent in the lowest recorded. The average figure in this latter series of eight cases was approximately 8 per cent arterial blood oxygen saturation. The reason for this wide variation in oxygenation of the two groups of cesarean sections could not be determined. There was some correlation with the elapsed time from incision of the uterus and delivery of the baby. When delivery was promptly completed after opening the uterus, the oxygenation of the fetal arterial blood was low. When there was a delay of five or more minutes after incision of the uterus before the baby was delivered, the oxygenation was higher. It would not be unreasonable to assume that mechanical stimulation of the uterus during cyclopropane anesthesia may cause a reflex contraction of this muscle and interfere with oxygenation of the fetus. If delivery is delayed, the reflex stimulation may be lost and better oxygenation ensue. During studies on experimental animals, Barcroft found that the oxygen content of the umbilical vein varied with

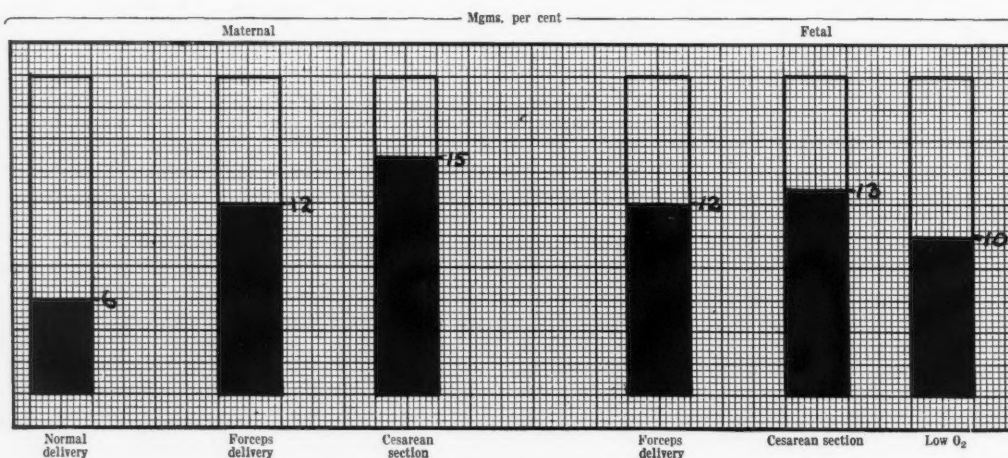


Fig. 6.—Blood concentration of cyclopropane.

the technique employed and the elapsed time in which the cesarean section was performed.

In these studies there was no correlation between the oxygen content of fetal arterial blood and the period of gestation. Whether or not the mothers were in labor at the time of operation seemingly had no influence upon fetal blood oxygenation. The average carbon dioxide content of arterial fetal blood of those cases with adequate oxygenation was 44 volumes per cent. In babies with low oxygen content the carbon dioxide was considerably higher, reaching values up to 60 and averaging 55 volumes per cent. The values found by Eastman in unanesthetized babies were approximately 44 volumes per cent.¹

The cyclopropane content of the maternal blood varied with the duration of anesthesia. In normal deliveries the range was from 5 to 12 milligrams per 100 cubic centimeters of blood. When forceps were used and anesthesia prolonged, the arterial cyclopropane averaged approximately 14 milligrams per 100 cubic centimeters. This value was slightly higher in cesarean sections, averaging 15 milligrams per 100 cubic centimeters. The cyclopropane content of the fetal arterial blood varied, likewise, with the depth and duration of anesthesia. In normal deliveries the range was from 2 to 8 milligrams per 100 cubic centimeters, while in those done with forceps the average was approximately 12 milligrams per 100 cubic centimeters. The highest values for cyclopropane in fetal blood were in cesarean sections which averaged 13 milligrams per 100 cubic centimeters. The cyclopropane content of the arterial blood of the fetus was found to be considerably lower in babies with low oxygen saturation than in those that were oxygenated. It was interesting to find a high carbon dioxide content with a low oxygen and low cyclopropane content. It suggests an interference in the transfer of gases from the mother to the fetus. Asphyxia may alter placental permeability so that cyclopropane and oxygen are not so readily transported to the fetus, and similarly carbon dioxide is less easily transferred to the maternal circulation.

This study was undertaken primarily to learn the effects of cyclopropane anesthesia upon the saturation of fetal blood with oxygen and carbon dioxide. It was presumed that changes in the concentrations of blood gases would have an effect upon the initiation of respiratory efforts of the newborn. In this small group of cases no such correlation could be made.

In some cases with a very low oxygen saturation the initiation of respiration was prompt, while in others with similar oxygen content beginning respirations were delayed as much as eight to ten minutes. In normal deliveries the initiation of respiration was immediate in all six cases. In these the cyclopropane concentrations in the fetal blood were lower than in the other group.

One would hesitate to argue from these results that anoxemia at birth was unrelated to asphyxia neonatorum. The evidence already accumulated by Eastman,¹ Wilson,⁷ and others cannot be refuted. It would not be logical to conclude that cyclopropane in the fetal blood delays the initial respiratory effort. Babies with 15 milligrams of cyclopro-

pane per 100 cubic centimeters of blood breathed promptly. It can be stated, however, that this study adds to the accumulated indications that several factors influence the onset of respiration. It is almost certain that low oxygen saturation of fetal blood at birth is one of the more prominent of these factors, and it is not unlikely that high concentrations of cyclopropane in the blood may be another.

The data collected in this study are of little value in determining the effects of cyclopropane upon the fetus. The gas is promptly eliminated from the maternal blood and tissues, and it is not unreasonable to assume it is the same from fetal tissues, since elimination of inert gases follow physico-chemical principles. The effect of cyclopropane upon fetal nervous tissue and reflexes is still unknown. The effect of cyclopropane on the fetal respiratory mechanism and the mechanism which initiates respiration is certainly not known.

Any procedure or drug which interferes with placental circulation during or before birth should be used cautiously and judiciously. In all analyses completed there was a lowering of the oxygen content of the arterial blood of the fetus at the moment of birth during cyclopropane anesthesia. This does not contraindicate the use of the drug, but it would seem to suggest that when cyclopropane anesthesia is employed for obstetrical patients the degree of narcosis should be carefully adjusted. In this clinic such anesthesia is never deliberately carried beyond second plane third stage.

SUMMARY

The oxygen, carbon dioxide, and cyclopropane content of arterial and venous blood from the mother and infant has been determined during administration of cyclopropane anesthesia for delivery. Deliveries completed spontaneously, with forceps and by cesarean section, were included.

The maternal blood oxygen content was found to be increased, and the carbon dioxide content little altered with cyclopropane anesthesia. Cyclopropane was present in the fetal blood in concentrations approaching those of the mother. The fetal blood oxygen content at birth varied widely in the different cases studied. It was not found to be more than the oxygen content reported from studies of fetal blood completed without maternal anesthesia. The variations in oxygen content of fetal blood could not be correlated definitely with other factors involved in delivery. There was no direct correlation between the oxygen or cyclopropane saturation of fetal blood and the initiation of respiratory activity.

The data collected could not be interpreted in favor or against the use of cyclopropane for obstetrical anesthesia. It did suggest that when it is used the degree of narcosis should not exceed the upper planes of the surgical stage.

477 First Avenue.

REFERENCES

1. Eastman, N. J.: *Asphyxia Neonatorum*, Internat. Clin., 2: 274-300 (June), 1936.
2. Waters, R. M., and Schmidt, E. R.: *Cyclopropane Anesthesia*, J. A. M. A., 103:975-983 (Sept. 29), 1934.
3. Woodbury, R. A., Hamilton, W. F., and Torpin, R.: *Relationship Between Abdominal, Uterine, and Arterial Pressures During Labor*, Am. J. Physiol., 121:640-649 (March), 1938.

4. Smith, C.: Cyclopropane in Obstetrics, Surg. Gynec., and Obst., 69:584, 1939.
5. Adriani, J.: Method for Collecting Blood for Gas Analysis, J. Lab. and Clin. Med., 23:1094-1096 (July), 1938.
6. Orcutt, F. S., Waters, R. M.: Method for Determination Cyclopropane, Ethylene and Nitrous Oxid in Blood with Van Slyke-Neill Manometric Apparatus, J. Biol. Chem., 117:509-515 (Feb.), 1937.
7. Wilson, R. A., Torrey, M. A., Johnson, K. S.: Initiation of Respiration in Asphyxia Neonatorum, Clinical and Experimental Study Incorporating Fetal Blood Analyses, Surg., Gynec., and Obst., 65:601-622 (Nov.), 1937.

AMPUTATION THROUGH THE LOWER THIRD OF THE FEMUR: A MODIFIED TECHNIQUE*

By CLARENCE E. REES, M. D.
San Diego

PATIENTS upon whom it is necessary to perform amputations above the knee are often poor surgical risks. The vascular disease resulting in gangrene of the lower extremity, is only one part of a generalized process which may also have caused degenerative changes in the heart, brain, and kidneys. If diabetes is present, the susceptibility to infection is increased—a danger which, in any case, is great because of the bacteria in the lymphatic drainage of the necrotic area. In these patients, therefore, the plan of the operation and the manner in which it is performed, may determine whether the amputation is a life-saving or a life-taking measure.

SURGICAL PRINCIPLES

Certain surgical principles, which in the good-risk patient may be considered more lightly, must be strictly observed. The operation must provide for (1) the maintenance of maximum blood supply to all parts of the stump; (2) accurate hemostasis; (3) a minimum amount of devitalized tissue in the wound; (4) reduction to a minimum of the amount

* Chairman's address. Read before the Section on General Surgery of the California Medical Association at the sixty-ninth annual session, Coronado, May 6-9, 1940.
From the Rees-Stealy Clinic.

of foreign material allowed to remain in the wound; (5) avoidance of muscle tissue; and (6) elimination of tension in the closure of all soft tissues.

Any present-day amputation can be but a modification of procedures that have previously been described, and any such modification has for its goal improved technique and end-results. I wish to present a procedure for amputation above the knee which, I believe, (1) simplifies the performance; (2) assures more strict observance of the surgical principles just listed; and (3) produces a most satisfactory stump.

AUTHOR'S MODIFICATION

The operation is performed with the patient in the prone position. By this means the important vascular structures of the posterior thigh are brought into easy surgical accessibility. Sandbags are placed under the upper part of the thigh to elevate the knee three or four inches from the table. The lower one-half of the thigh and the upper one-third of the leg are surgically prepared, and the lower part of the leg and foot are wrapped in sterile dressings to avoid contamination of the wound when the knee is flexed. The entire area is then brought through the opening of a laparotomy sheet so that free motion of the knee is permitted throughout the operation.

With the knee flexed at a right angle, an incision which extends to the deep fascia is made around the leg at a level corresponding to the lower end of the tibial tubercle. The ligamentum patella is incised transversely. The joint capsule is incised on each side of the patella to a level above the upper margin of the patella into the suprapatellar bursa, and the anterior superficial structures are separated from the capsule of the knee joint. The tendon of the biceps femoris is detached from the head of the fibula, by a crosswise incision close to the bone. The tendinous attachments of the semitendinosus, semimembranosus gracilis, and sartorius muscles are detached from the medial tuberosity of the tibia. The knee is extended and the popliteal space is opened in the line of incision. The popliteal space is exposed by retraction en masse of

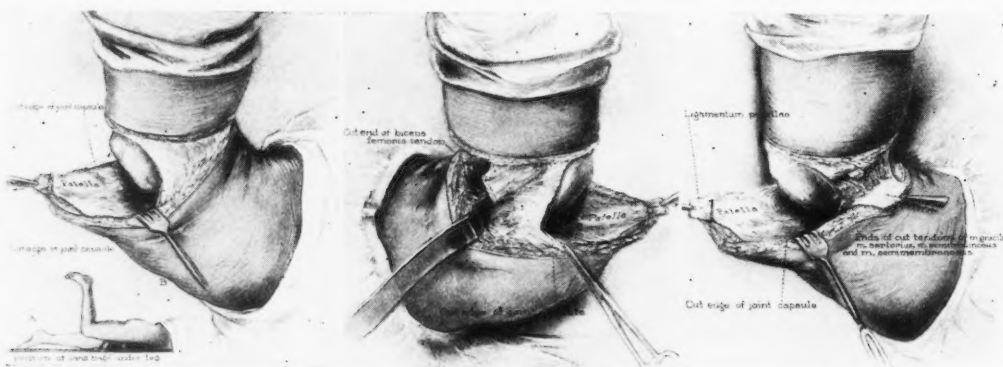


Fig. 1

Fig. 2

Fig. 3

Fig. 1—(a) Patient in prone position with sandbags under thigh. (b) Circular incision to the deep fascia at level of lower border of tibial tubercle. Patellar ligament detached. Incision of joint capsule over suprapatellar bursa.

Fig. 2.—Lateral view. Detachment of biceps tendon from head of fibula.

Fig. 3.—Medial view. Detachment of semitendinosus, semimembranosus, gracilis, and sartorius muscles from head of tibia.

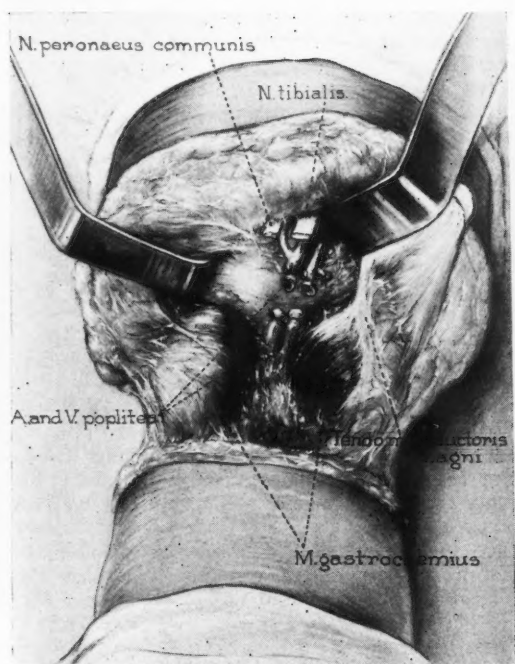


Fig. 4.—Popliteal space has been opened by incision of popliteal fascia, nerves have been divided, popliteal artery and vein have been divided and ligated.

the posterior structures which have been sectioned. The tibial and common peroneal nerves are located and sectioned as high as possible, and the popliteal artery and vein, or veins, are located and ligated separately, or together, and sectioned. The remaining fat of the popliteal space is cleared from the bone and patent arteries which form the anastomosis around the knee are ligated. The adductor longus tendon and the adductor fascia are detached from the tubercle, and the site for the section of the bone above the origin of the posterior crural muscles is selected. All soft tissues are retracted, the bone is sectioned, and the anterior margin of the bone is beveled. The patella is then removed from the capsule.

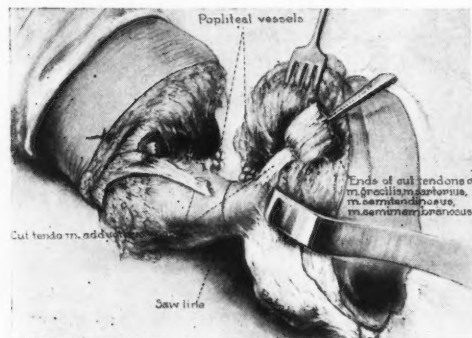


Fig. 5

Fig. 5.—Medial view. Detachment of adductor longus. Site of section of bone above the origin of the crural muscles and below the origin of the quadriceps tendon.

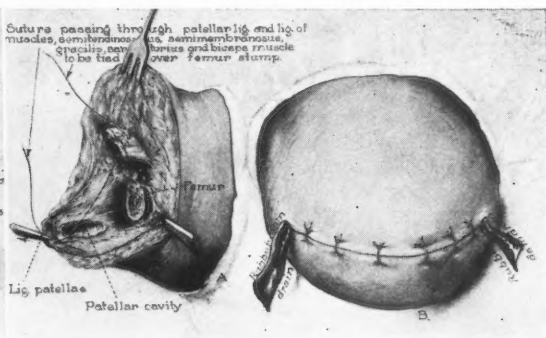


Fig. 6

Fig. 6.—(a) Patella has been removed. Single silk suture through all of the tendons except the adductor longus, ready to draw tendons over the end of the bone. Retraction of the posterior muscles covers the bone with the quadriceps tendon, and displaces the line of closure posterior to the femur. (b) Closure of stump. Drains optional.

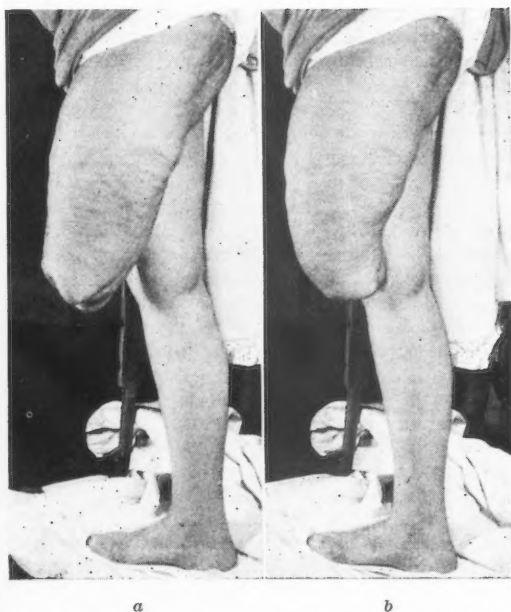


Fig. 7.—End result. (a) Stump with quadriceps tendon contracted. (b) Stump with flexor tendons contracted. Voluntary movement of soft tissues over bone.

In closing, a single silk suture is passed through the tendon of each detached muscle, except the adductor longus, and tied over the end of the femur. The skin and superficial fat are closed transversely with loosely tied sutures, and a small drain, which is allowed to remain in place for twenty-four to forty-eight hours, is placed in each angle of the wound.

COMMENT

There are six outstanding advantages to the procedure which I have described:

1. The approach from the posterior aspect of the thigh permits full vision and easy surgical accessibility to the important structures throughout the operation, since the main and collateral blood vessels and the nerves at this level lie posterior to the femur. The tendon of the quadriceps femoris,

with its ligamentous expansion, is essentially the only important structure, from a surgical point of view, on the anterior aspect of the thigh. By this approach it is possible to secure accurate hemostasis of individual vessels with small ligatures, and to avoid mass ligations.

2. The circular incision assures a maximum blood supply to the superficial structures of the stump. The fact that flaps are not fashioned, obviates the necessity for lateral and medial longitudinal incision. Dissection within the remaining soft tissue is avoided, and retraction of these structures en masse, after sectioning, further assures uninterrupted blood supply.

3. The use of a single silk suture to draw the tendons of the detached muscles together over the bone results in an obliteration of dead space. As soon as the effects of the anesthesia have passed, muscular contraction retracts and stabilizes these structures snugly over the end of the bone. The use of only one suture also reduces the amount of foreign material left in the wound.

5. The avoidance of muscle tissue. This has been especially reemphasized recently by Callander, who has convincingly demonstrated a reduction in postoperative infection and mortality by minimizing trauma to muscle.

6. The end-result is an amputation stump in which the end of the bone is covered not only by skin and subcutaneous fat, but by tendons and deep fascia as well. The anatomical pattern of the remaining thigh is retained, and all soft structures to the end of the stump are movable by voluntary muscular action.

2001 Fourth Avenue.

DISSECTING ANEURYSM*

By EUGENE S. KILGORE, M. D.
San Francisco

ALTHOUGH less than four hundred case reports have been published, dissecting aneurysm is not very rare. Like coronary thrombosis a few years ago, it is now only beginning to be recognized clinically; but the antemortem diagnosis will undoubtedly become common with better understanding of the morbid anatomy and physiology of the condition and the corresponding clinical phenomena.

PATHOLOGY

Dissecting aneurysm is a separation of the coats of an artery by escaped blood. Of the reported cases all but a few were in the aorta, with or without extension to its branches. Three were in the pulmonary artery,¹⁰ and others have been mentioned in cerebral or other smaller arteries. The blood may come exclusively from vasa vasorum;¹¹ usually the intima is broken secondarily, if not initially. The cleavage plane is in the outer part of the media. If the adventitia is also quickly penetrated at a near-by point, the episode is spoken of simply as "rupture of the aorta": but more or less dissection is the rule in spontaneous rupture—not,

however, in traumatic rupture. Most dissecting aneurysms soon rupture externally—into the pericardium (more than 50 per cent), left pleural cavity, mediastinum, retroperitoneal tissue, or elsewhere. "Spontaneous" rupture of the undiseased aorta has often been mentioned, with the suggestion that it occurs at "points of lowered resistance," *e. g.*, at the site of a congenital stenosis or at the insertion of the atrophied ductus arteriosus. Two or three centimeters above the aortic valve is the common location. But in the absence of severe trauma, which is rarely alone responsible, it is probable that serial sections would show antecedent disease in most or all cases.

Syphilis is not the cause, and its sclerosing effect on the media may even prevent dissection—witness the patient of Weiss,¹² in whom dissection bordered but failed to invade a syphilitic area. Possibly other infections or obscure atheromatous lesions are at times responsible. But undoubtedly the usual cause is Erdheim's² *medionecrosis aortae idiopathica cystica*. These cysts, possibly of toxic or infectious origin, often multiple, of various sizes but often invisible to the naked eye, are filled with collagenous or necrotic material, and in their formation involve the destruction of medial tissue. They are found at times in the absence of dissecting aneurysm.⁹ The tears of the intima which they cause are occasionally multiple,⁸ and often appear as slits at a right angle to the direction of blood flow, *i. e.*, favorable to dissection. The aneurysm usually does not embrace the entire circumference of the aorta.

Dissection may progress gradually or intermittently, at times with arrest, thrombosis, organization, and repair; or it may rush through the entire course of the aorta and into one or more large branches. Branches may be choked, or small ones torn off in the process. External ballooning may compress neighboring structures, a remarkable example being that of George II of England, whose dissecting aneurysm compressed the pulmonary artery with resultant rupture of the right ventricle—the catastrophe while straining at stool.⁹ And the separated inner coats bulge into the lumen of the vessel and may more or less completely block it, reducing circulation below and raising pressure above. Occasionally this diversion of pressure forces the aneurysmal blood back into normal channels by rerupture into the lower aorta or into one or more of its branches. A few have survived after such an escape-valve effect, the new channel in time becoming endothelialized and carrying part or most of the stream.

DIAGNOSIS

The clinical picture of dissecting aneurysm, with its pain, anxiety, collapse and generally shock-like appearance, has been so commonly confused with that of coronary thrombosis that, in the following description, comparative remarks on the latter condition are included parenthetically. Most of the patients with dissecting aneurysm are middle-aged men, but many are under thirty-five. (Coronary: rare under thirty-five.) Three or four per cent of the reported cases were in advanced pregnancy.^{3,4}

*Read before the Section on General Medicine of the California Medical Association at the sixty-ninth annual session, Coronado, May 6-9, 1940.

(Coronary: no such pregnancy incidence.) Hyperpiesis is common. (Coronary: a smaller proportion with hyperpiesis.) Symptoms may begin when the patient is at rest or, more commonly, during exertion, which, however, may not be great. In seven reported cases the onset was associated with defecation, a pregnant woman was seized with pain while stooping, one patient when boarding a bus, another when tolling a bell,¹⁰ Middleton's⁵ patient while removing an overcoat, one of Davy and Gates'¹ while stretching the arms backward, one of mine while reaching high up to insert an electric bulb, and another (patient of Dr. K. O. Haldeman) while leaning forward over a table—all suggesting contortion of the thorax as a precipitating factor. (Coronary: onset usually independent of any special exertion.) Early faintness or syncope is common, possibly reflex from the aortic depressor nerve originating at the base of the aorta; and with this may be nausea and vomiting. (Coronary: weakness, slowly developing, is common, but not initial syncope or vomiting.)

The pain may be little, discontinuous, or even absent, but is usually terrific; it may begin mildly and go on with cruel crescendo, but often strikes with explosive violence. Patients may cry out or writhe in agony. They use strong adjectives to indicate the intensity of the pain, but are often at a loss for similes to depict its quality. It may be stabbing, tearing, bursting, etc. Throbbing of the pain in synchrony with the heart beat was admitted by two recent patients. This is easy to understand when successive pulse waves are splitting the media bit by bit, or stretching the newly formed aneurysmal wall; and it may prove to be characteristic. Nitrites may or may not alleviate temporarily. A free interval of hours, days, or longer, often precedes the final rupture. (Coronary: pain may be absent, usually severe with crescendo, often with compression quality, and often preceded by effort-induced angina; attitude usually immobile—patient may sit up or pace the floor, but does not writhe. Pain usually not relieved by nitrites.) The pain commonly begins under the xyphoid and spreads up along the sternum and to the interscapular region; and, with advancing dissection, it is likely to spread down through the abdomen and lower back, perhaps to the legs. As a rule it does not enter an arm unless by cutting down the blood supply. But there are great variations. Radiated pain may open the scene, as in one man who went from his business desk to his exodontist when seized with pain in both lower bicusps. The dentist promptly sent him to my office in the same building, and by that time the pain was spreading throughout the chest, back, and abdomen. Necropsy the same day showed a tear in the ascending aorta with dissection all the way down and into both iliacs; rupture into the pericardium. (Coronary: pain occasionally epigastric, usually substernal, usually radiating to left arm or both arms, neck, jaw, or interscapular region; may spread, as from lower sternum upward, but not progressively downward as in extensive dissection.)

Depending on the location and degree of bulging into the lumen of the aorta, on involvement of its

branches, and on compression of surrounding structures by external expansion or hemorrhage, a great variety of phenomena are displayed. Blood pressure may be low, but is often high and may rise in one or both arms while it falls in the legs. (Coronary: usually a reduced, but well-distributed blood pressure.) Bizarre systolic murmurs or thrills may appear along the course of the aorta or its branches; and about one patient in five suddenly develops signs of aortic valve incompetence from distortion of the cusp anchorages. With slow oozing there may be a pericardial or pleural friction sound, and later signs of fluid—more often in the left pleural cavity, and sometimes serous in character. (Coronary: transitory pericardial friction common, but not fluid accumulation unless with congestive failure.) There may be increase in aortic dullness and tenderness in the suprasternal notch or along the abdominal aorta. And to the many proximal and remote effects of neighborhood pressure characteristic of other aneurysms is here added a great array of possible disturbances from widespread and sudden choking of nutrient arteries to brain, cord, extremities, and viscera. Among those mentioned are: reduction or absence of femoral pulses, inequality or asynchrony of carotid or arm pulses, partial or complete paralysis of one side of the body or of one or more extremities, paresthesias, loss of sphincter control, tympanites, and hemoglobinuria. The neurologic changes may be inconstant.

The x-ray may furnish important evidence, such as a denser shadow inside the enlarged aortic silhouette, an arcuate protrusion with or without pulsation, dissection enlargement of branches, displacement of trachea or esophagus, or indication of escaped blood in a pleural cavity or elsewhere.¹³ The usually unmodified electrocardiogram serves to exclude coronary obstruction; but it is possible for dissection at the root of the aorta to close a coronary ostium, and fluid in the pericardium may cause deceptive electrocardiograms. As in coronary occlusion, the acute attack may be followed by fever, leukocytosis, and accelerated sedimentation rate.

PROGNOSIS

About 90 per cent die from rupture in the first few hours or days, and the few survivors are likely to be cardiac cripples because of diminished caliber of the aorta, aortic valve incompetence, arteriovenous communication, or other defect. Osler⁷ describes a man who lived comfortably for over thirty years with a double-tube aorta, resulting from dissection and rerupture.

TREATMENT

Liberal use of opiates is in order for pain and restlessness; and blood pressure should be kept constantly as low as possible and tolerable. Erythrol tetranitrate 0.015, if tolerated by the stomach, is desirable for its sustained effect—about four or five hours. Copious venesection seems logical to reduce pressure and blood viscosity and to promote coagulation.

490 Post Street.

REFERENCES

1. Davy, H., and Gates, M.: Dissecting Aneurysm of Aorta, Brit. M. J., 1:471-472 (March 25), 1922.
2. Erdheim, J.: Medionecrosis aortae idiopathica cystica, Virchow's Arch. f. path. Anat., 276:187-229, 1930.
3. Göebel, A.: Spontanruptur der Aorta bei einer Schwangeren im 8 Monat auf dem Boden degenerativer Mediaveränderungen der Aorta ascendens, Zentralbl. f. Gynäk. 60:38-47 (Jan. 4), 1936.
4. Maher, C. C.: Microscopic Pathology of Cardiac Syphilis, Am. Heart J., 6:37-41 (Oct.), 1930.
5. Middleton, W. S.: Inter-State Post-Grad. Med. Assembly Proceedings, p. 76, 1931.
6. Nicholls, F.: Philosoph. Trans., 52:265, 1761.
7. Osler, Wm.: Modern Medicine, 4:470, 1908.
8. Roberts, J. T.: Medionecrosis Aortae Idiopathica Cystica; Report of Case, with "Healed" Dissecting Aneurysm, Am. Heart J., 18:188-200 (Aug.), 1939.
9. Rottino, A.: Am. Heart J., 19:330, 1940.
10. Shennan, T.: Dissecting Aneurysms, Med. Research Council, Special Rept. Series No. 193, His Majesty's Stationery Office, London, 1934.
11. Tyson, M. D.: Dissecting Aneurysms, Am. J. Path., 7:581-603 (Nov.), 1931.
12. Weiss, S.: Dissecting Aneurysm of Aorta; Two Cases with Unusual Features, New England J. Med., 218:512-517 (March 24), 1938.
13. Wood, F. C., Pendergrass, E. P., and Ostrum, H. W.: Dissecting Aneurysm of Aorta, with Special Reference to Its Roentgenographic Features, Am. J. Roentgenol., 28:437-465 (Oct.), 1932.

SOME ASPECTS OF NUTRITION IN SURGICAL PATIENTS

By I. S. RAVDIN, M. D.
Philadelphia, Pennsylvania

PART II*

WOUND HEALING

IN a study of wound healing which Smelo⁹ made in my department in 1935, he concluded that "factors other than the local dressing appear to play the dominant rôle in determining the rate of wound healing." Anderson,¹⁰ continuing these studies, stated that "the healing of granulating wounds under normal conditions, as determined by precise volume measurement, occurs according to a regular geometric curve which may be expressed in function of area and time by the mathematic equation presented by Carrel¹¹ and DuNouy¹² for the normal cicatrization of clean surface wounds."

That disruption is still encountered in wounds free from infection in which hemostasis was excellent, in which trauma to tissues and tension were minimal, and unusual strain obviated, strongly supports the concept that other factors of a general character play an important part in the failure of certain wounds to heal. That purely local factors may intensify the factors of a biologic character will not be doubted by anyone who has carried on investigations in this field.

We have shown that dogs which have been made hypoproteinemic by prolonged feeding of a low protein diet and plasmaphereses have a marked delay in fibroblastic proliferation, and thus wound healing is retarded. The hypoproteinemia in our animals was but one manifestation of the protein

starvation of the dogs. Although at first we were inclined to attribute the delay in fibroblastic proliferation to the presence of edema, we are now convinced that the mechanism is associated with a profound disturbance in protein metabolism, the hypoproteinemia being only an easily measurable indicator of the extent to which so-called labile stores of protein have already suffered.

It is well known that cellular repair and regeneration require protein, for in the absence of an adequate amount of certain essential amino-acids growth cannot take place. Admont Clark¹⁴ has shown that on a diet high in protein there was no quiescent period in the repair of wounds, and Harvey and Howes¹⁵ have reported that such a diet causes accelerated fibroblastic proliferation. Without adequate building stones, repair cannot take place.

A protein deficiency is, of course, not the only mechanism resulting in wound disruption. Sokolov¹⁶ and Lanman and Ingalls¹⁷ have shown that a vitamin C deficiency is also an important biological factor in this complication. These two nutritional disturbances are frequently found in patients who come for operations for gastric ulcer and cancer, duodenal ulcer, and biliary tract disease. That plasma may be used to replenish depleted protein stores was indicated in the experiments in which we gave large amounts of plasma, as much as 2,400 cubic centimeters, during a two-week period to hypoproteinemic dogs that had been on a low protein diet for some days. The amount of plasma which we administered intravenously was more than six times the calculated plasma volume of the animal, but the plasma protein concentration never exceeded the original normal level for the dog. With the restoration of a normal serum protein concentration and very likely a more nearly normal store of tissue protein, the wounds promptly healed. Addis and his associates⁴ and Holman, Mahoney, and Whipple¹³ have found that plasma protein can be utilized to replenish the depleted stores of tissue protein, and it is this purpose, we believe, that the excess protein fulfilled.

When all the local factors favoring wound disruption are controlled, there will remain wounds whose failure to heal must be due to more widely acting causes such as hypoproteinemia and a reduction in the labile protein stores, and deficiencies in important accessory foodstuffs.

DIET AND SUSCEPTIBILITY OF THE LIVER TO INJURY

Data which Goldschmidt, Vars and I¹⁸ have collected during the last few years strengthen the impression that the susceptibility of certain tissues to injury by a variety of chemical agents may be influenced by the composition of the organ at the time of injury. We have paid particular attention to this relationship in a single organ—the liver, but the data we have simultaneously collected indicate that the relationship may have a much wider application. That a diet high in carbohydrate is protective, and that a diet high in fat induces maximal susceptibility of the hepatic cells, when the liver is exposed to chloroform, has been re-

* Part I appeared in the July issue on page 10.

peatedly confirmed since first it was reported by Opie and Alford¹⁹ in 1914.

It is generally agreed that fasting markedly intensifies the susceptibility of the hepatic cells to injury by chloroform.

In the experiments I shall review, the diets have been adequate and feeding prolonged; the hepatic glycogen and lipid concentrations have been determined analytically on control animals (rats) before, and on the experimental animals after, anesthesia with chloroform.

Prolonged dietary régimes with chemical analyses of the resultant composition of the liver have yielded information which, when correlated with the histological evidence, reveals the influence of each of the foodstuffs in modifying the degree of hepatic injury produced by uniform periods of chloroform anesthesia. The evidence we have collected has led us to certain deductions concerning the mechanism by which a high carbohydrate, fat, or protein dietary conditions the susceptibility of the liver to injury by chloroform.

Whatever may be the fundamental reasons for the toxic action of chloroform upon the hepatic cells, our data point strongly to the fact that both the incidence and degree of injury increases in the concentration of lipid in the liver.

No evidence has been obtained by us that the level of the glycogen *per se* in the liver, at the time of anesthesia, influences the toxic action of chloroform. Although I have searched for it, I have found no completely satisfactory theory to explain the protection conferred upon the liver by a high carbohydrate diet. That a diet rich in carbohydrate protects the liver, I do not doubt.

It seems to us that the explanation of the protective action of a high carbohydrate diet lies in some concomitant effects produced when large amounts of glycogen are laid down in the liver. Rosenfeld²⁰ found that, under many conditions in the body, the depletion of hepatic glycogen is followed by an increase in fat in that organ, and vice versa. While the Rosenfeld hypothesis holds true under many conditions, we have by diet, in both the experimental animal and man, shown that there may co-exist in the liver a high concentration of glycogen and a high concentration of lipid. A great many data which we now have in both the experimental animal and man show that the reciprocal relationship of Rosenfeld is not an invariable rule.

We have shown that the susceptibility of the liver to injury by chloroform is progressively enhanced by the presence of increasing concentrations of lipid. In view of this it would seem plausible to conclude, since glycogen as such is ineffective even at low levels of hepatic lipid, that the protective action of a high carbohydrate diet is due chiefly to its effect in reducing the stores of hepatic lipid. In order to do this the carbohydrate must be given in adequate amounts and for a sufficiently long period. This explanation satisfactorily accounts for our failure to obtain protection from injury by chloroform when glucose was administered during the period of anesthesia. The addition of an adequate amount of protein (17 per cent or more) to the dietary provided livers which, even

in the presence of a low concentration of glycogen and a high concentration of lipid, were protected to a degree against the toxic action of chloroform.

Any comparisons of the relative protection offered by a carbohydrate and a high protein diet are futile unless the lipid contents of the livers are known. The value of the foodstuffs to the liver in protecting it against chloroform resolves itself into the positive action of dietary protein, the indirect action of carbohydrate, and the increased susceptibility due to hepatic lipid.

In view of the high degree of protection which a high protein dietary confers upon the liver, it should be pointed out that a carbohydrate diet may also be of value under conditions in which it can act as a sparer of the protein stores of important viscera.

While carbohydrate exerts only an indirect action in decreasing the damaging effects of chloroform upon the hepatic cells, the protection afforded by a high protein diet appears to be more direct and related to some intrinsic value of the protein itself. In this respect the finding that a previous high protein diet protects the liver against necrosis by chloroform at a high level of hepatic fatty acids assumes an added significance.

The mechanism by which the protein of the diet aids the liver in resisting the necrotic action of chloroform, with our present information, can only be a subject of conjecture.

The question of protein storage in the body, on a high protein diet, becomes of particular importance in relation to the protection conferred by such a diet, especially if we assume that it is due to protein *per se*. It is of interest that investigators in the field of protein storage have invariably directed their efforts to the liver as the major storehouse for protein.

There is some basis for believing that a high protein diet previous to liver injury by chloroform may make available stores of protein within the body. This protein, stored or elaborated into hepatic or other body tissue, may serve to protect the cells or to replenish a structure which is being or has been attacked. The available stores of protein may prevent or ameliorate the destructive action of the chloroform or the damage which occurs may be rapidly repaired so that it does not proceed to necrosis. Our data show that the main result of a high, as compared with a low protein diet is to decrease the incidence of hepatic necrosis. It is, of course, possible that the processes of damage and repair may conceivably be proceeding at the same time.

From these data and others soon to be published, we have concluded that a liver high in fat and low in protein is maximally susceptible, while a liver low in fat and high in protein is maximally protected against the effects of fat-soluble hepatotoxic agents.

The problem of liver injury following anesthesia has concerned the surgeon chiefly in biliary tract disease. In order to condition minimal injury, it is important that the lipid deposits of the liver be decreased as much as possible prior to operation. Johnson, Vars, Zintel, and I²¹ have studied the

effectiveness of various diets in decreasing the hepatic lipid in the presence of common duct obstruction in the dog. The data may be summarized by stating that a high carbohydrate-high protein diet is twice as effective in this respect as is a high carbohydrate diet alone, given in the same number of calories per kilogram of body weight per day. In conditioning the liver to minimal injury, or in providing for repair subsequent to injury, it is necessary that a diet of suitable composition be administered and that the total caloric intake be adequate for the energy requirements of the individual and for providing for the replenishment of the depleted storehouses of body foodstuffs.

Best, Channon, and their coworkers²² have reported, and we have confirmed their findings, that a high protein diet is conducive to a lesser deposition of hepatic lipid. The level of hepatic lipid and glycogen are from our data markedly affected by the amount of protein in the diet.

The hypotheses which assume that glycogen *per se* is effective in protecting the liver against the action of chloroform receive no support from our data. It protects if, during its deposition in the liver, the concentration of liver lipid is reduced, and probably is, as the result of an adequate store of glycogen, it spares the hepatic stores of protein.

Studies we are now making in man confirm the data we have obtained from the rat and dog, that a high carbohydrate-high protein dietary is the most efficient in conditioning a liver with adequate glycogen, low lipid and high protein concentrations. It is, we believe, the type of diet which will result in minimal injury and provide for rapid repair of existing injury when the liver is exposed to a variety of hepatotoxic agents.

We believe that if food can be taken by mouth this is the best method of obtaining the desired objective. If the patient will not eat the necessary amount, or if it is desirable that food not be placed in the stomach, the orojejunal method which Stengel and I²³ have described provides an efficient means of introducing sufficient calories of suitable composition. Where it is desired rapidly to replenish depleted stores of protein in the plasma or tissues, we believe that the intravenous injection of plasma is at present the most effective means of obtaining this. The intravenous injection of plasma is not attended by the postinjection reactions that so frequently follow the use of serum. We have administered intravenously amino-acid mixtures, made from the hydrolysis of casein and soy bean, reinforced with tryptophan, cystein and methionin; and while we have kept the dog and man in positive nitrogen balance there has been no evidence that the total plasma or liver protein, or the protein concentration of the plasma was replenished following a period of protein depletion.

A better understanding of these and many other problems of nutrition, which are constantly present in surgical patients, will lead to a further reduction in the morbidity and mortality of anesthesia and operation in a wide variety of conditions.

The nutritional state of the individual has been considered to bear some relationship to general resistance. I hope that I have shown you that the

part which it plays is much more important than is generally supposed. Such serious complications as failure of a gastro-enteric stoma to empty, wound disruption, or serious hepatic necrosis, can in large part be prevented by restoring the storehouses of protein prior to operation and maintaining them after operation.

3400 Spruce Street.

REFERENCES

9. Smelo, L. S.: Arch. Surg., 33:493, 1936.
10. Anderson, D. P.: Ann. Surg., 108:918, 1938.
11. Carrel, A.: (a) Proc. Inst. Med., 8:62, Chicago, 1930; (b) J. Exp. Med., 36:385, 1923; and (c) Ebeling, A. H., J. Exp. Med., 34:317, 1921.
12. DuNouy, P. L.: J. Exp. Med., 24:451, 1916.
13. Holman, R. L., Mahoney, E. B., and Whipple, G. H.: J. Exp. Med., 59:269, 1934.
14. Clark, A. H.: Bull. Johns Hopkins Hosp., 30:117, 1919.
15. Harvey, S. C., and Howes, E. L.: (a) Ann. Surg., 102:941, 1935; (b) J. Exp. Med., 5:577, 1932; (c) Ann. Surg., 91:641, 1930.
16. Sokolov, S.: Ergebn. d. Chir. u. Orthop., 25:306, 1932.
17. Lanman, T. H., and Ingalls, T. H.: Ann. Surg., 35:893, 1937.
18. Goldschmidt, S., Vars, H. M., and Ravdin, I. S.: J. Clin. Invest., 18:277, 1939.
19. Opie, E. L., and Alford, L. B.: (a) J. Am. Med. Assn., 62:895, 1914; (b) J. Exp. Med., 21:1, 1915; (c) J. Exp. Med., 21:21, 1915.
20. Rosenfeld, G.: (a) Alleg. Med. Zent. Zeit., 89:1051, 1900; (b) Ergebn. d. Physiol., 2:50, 1903; (c) Berl. Klin. Wchnschr., 41:587, 1904; (d) Berl. Klin. Wchnschr., 43:978, 1906; (e) Berl. Klin. Wchnschr., 47:1268, 1910.
21. Johnson, J., Ravdin, I. S., Vars, H. M., and Zintel, H. A.: To be published, Arch. Surg.,
22. Best, C. H., Huntsman, M. E., and Ridout, J. H.: (a) Nature, 135:821, 1935; (b) Channon, H. J., and Wilkinson, H., Biochem. J., 29:350, 1935; (c) Best, C. H., and Channon, H. J.: Biochem. J., 29:2651, 1935; (d) Best, C. H., Grant, R., and Ridout, J. H.: J. Physiol., 86:337, 1936.
23. Stengel, A., Jr., and Ravdin, I. S.: Surgery, 6:511, 1939.

HISTORY OF THE ANESTHETIC DEPARTMENT AT LANE STANFORD UNIVERSITY HOSPITAL IN SAN FRANCISCO*

By ADENA C. DUTTON, M.D.
San Francisco

LANE HOSPITAL was built in 1893 by Dr. Levi Cooper Lane on land donated by Captain James M. McDonald. The Hospital was under the supervision of a committee from the faculty of Cooper Medical College until 1912. At this time formal transfer was made to Leland Stanford, Jr., University, and the entire faculty was retained as a part of the new hospital staff. All activities of the Hospital were under the control of the Clinical Committee from the Medical Department of the University.

BEGINNING OF THE DEPARTMENT ON ANESTHESIA

Dr. Henry Gibbons, then dean of the Cooper Medical School, had asked Dr. Caroline B. Palmer, a graduate of the class of 1906, to take charge of

* Chairman's address before the Section on Anesthesiology of the California Medical Association at the sixty-ninth annual session, Coronado, May 6-9, 1940.

the administration of anesthetics. This step was made in 1909 toward the formation of a regular department in anesthesia because of Doctor Gibbons' concern over some fatalities which had occurred. Doctor Palmer acted in that capacity as head of the department for twenty-eight years, reaching her age for retirement in September, 1937.

Doctor Palmer's first interest in anesthesia began as a medical student at the San Francisco County Hospital, when she saw a patient die during induction. She felt that anything as important as anesthesia should have more serious attention than it was receiving in those days. Diligent study and close observation of anesthetics, given by Dr. Mary Botsford, qualified Doctor Palmer to administer many anesthetics during her internship at the Children's Hospital in San Francisco between 1906 and 1907.

After her appointment at Cooper, she visited all major medical centers where anesthetics were given. In this manner she became acquainted with the work of Dr. Isabella Herb in Chicago, of Dr. Gwathmey in New York, and of Dr. Richardson, the so-called Dean of Anesthesia, in Boston.

She also gained a thorough knowledge of all anesthetic agents by inspecting different manufacturing plants. At E. R. Squibb and Sons, in New York, she met Doctor Ferguson, who was in charge of their anesthetic department, and was given access to his personal library on anesthesia, then the largest in the United States.

Doctor Palmer took advantage of every opportunity available in this country to further her knowledge of the art of practicing anesthesiology as a medical specialty, and to qualify herself to train other doctors to become specialists in this field.

The proper psychic preparation of every patient was always stressed by Doctor Palmer. She believed and taught that the carefully regulated dosage of a hypodermic was a part of the anesthetic. Practically all patients received a hypodermic injection of morphin sulphate and atropin; but this did not include those under five and over seventy.

EXPERIENCES WITH VARIOUS ANESTHETICS

In the early days, heroin was used when the patient was said to be unable to tolerate morphin. Scopolamin, replacing atropin for a period of years beginning about 1924, was favored by some surgeons.

In June, 1929, a barbiturate was first introduced into the list of premedication agents; it was sodium amytal, used only intravenously. The clinical experiences at Stanford with it as an auxiliary anesthetic were published in the *American Journal of Surgery* in July, 1930. But its intravenous use was soon discontinued, because of the lengthened and complicated postoperative nursing care required. Later the oral administration of other sedatives gave more satisfactory results; these preparations were sodium amytal, luminal, allonal, nembutal, seconal, and barbital. For a period barbital was given alone or combined with sodium bromid. Sodium luminal, hypodermically, was used when ingestion of any drug was contraindicated.

In 1932, avertin, or tribromethanol, was employed to produce basal anesthesia in combination with local infiltration or with nitrous oxid-oxygen. In brain surgery ether vapor was used, and then this was replaced by local infiltration of novocain. Latterly, since its introduction, all major brain surgery is done under avertin combined with local novocain.

Paraldehyd given by rectum was used for a short period in gynecologic surgery, but was replaced by avertin or by scopolamin. Since 1936, paraldehyd has been used advantageously by several otolaryngologists for tonsillectomies. Some evipal, intravenously and rectally, and pentothal sodium has been used since 1934. Morphin sulphate and scopolamin, in a single dose, is given one and one-half hours before operation, or, in divided doses, two and one-half and one and one-half hours before the use of the more potent cyclopropane anesthetic agent.

Dr. R. L. Rigdon began the use of spinal anesthesia in genito-urinary surgery at Stanford in 1919. Tropococain was the drug used. This was later replaced by neocain and by novocain and pantocain. Spinal anesthesia was only occasionally used before 1929; after which time its popularity increased. The reasons for this were the preliminary use of ephedrin and, later, the control of the level of anesthesia by raising or lowering the head of the operating table.

HOW RECORDS WERE KEPT

The first records of anesthetics administered were written in ordinary student notebooks. In December, 1917, the first book of printed reports in duplicate was used. This was at the suggestion of Dr. Emmet Rixford. The form was designed after a study of records in use in the larger hospitals in the country at that time. Through the years modifications were made according to the changes in methods of administration and in operative procedures. The one in current use has complete pre- and postoperative information on the reverse side, and is filed in special departmental files.

COSTS OF ANESTHETIC AGENTS

In the early days ether was commonly used because of the prohibitive cost to the patient of anesthetic gases. Chloroform was used only upon the insistence of the surgeon. Doctor Palmer, early in her career, believed that the addition of oxygen to ether was less irritating and better for the patient than ether dropped on a mask. The earliest method of administering ether vapor was by using a hand bulb to force air through a large Erlenmeyer flask of ether held on the anesthetist's lap. Later a foot bellows replaced the hand bulb, and the flask was set in a depression on top of a wooden stool. Realizing that a better arrangement could be made, Doctor Palmer designed a vapor machine in which oxygen, in a low pressure cylinder of 125 gallons, was used. There was an inlet for the use of compressed air when it was available. A Murphy drip bulb placed in the tubing leading to the patient prevented liquid ether from being given accidentally. One cylindrical bottle contained water in the event

that oxygen was to be given without ether. The other cylindrical bottle and flask, with a larger evaporating surface, contained ether, so that a stronger concentration could be produced without heating the ether. This measure was taken to prevent the formation of irritating aldehyds and ketones. For an improved vapor machine, Doctor Palmer later utilized the high-pressure controls on the Ohio monovalve machines. Four high-pressure cylinders, containing 130 gallons each, were used. Two of these contained 100 per cent oxygen and two contained a mixture of carbon dioxide and oxygen. The three glass containers and Murphy drip bulb were retained. Ether vapor was commonly introduced through a hook in the mouth or a nasal catheter, but by designing a special perforated mask Doctor Palmer made its use adaptable for major surgery. The administration of nitrous oxide, with adequate oxygen, to young children (the youngest two months old) has been safely conducted at Stanford for many years.

OTHER OBSERVATIONS

One of the early improvements in anesthetic procedures was attention to posture of the patient on the operating table. Positions which facilitated operating and protection against nerve injuries, or those unduly tiring to the patient, were developed and used by Doctor Palmer. Beginning supportive measures early, by maintaining body fluids and by preventing heat loss, operative shock was kept down to a minimum. Special protective care has always been taken in transferring patients to and from operating rooms.

The first administrations of nitrous oxide were with a White dental machine. Oxygen, when added, was given by means of a catheter in the nose or by a hook in the corner of the mouth. Cylinders were used which contained one hundred gallons and cost \$3 each.

A first model Teter machine was purchased which would enable oxygen to be given simultaneously with nitrous oxide. There was no mixing chamber—each gas being allowed to flow to the patient independently through a single tube and face inhaler.

There was always great objection to the cost of anesthetic gases. These were first obtainable on the Pacific Coast only in small cylinders. About this time Doctor Botsford went to Cleveland to attend the clinics of Doctor Crile, who was doing operations under gas and oxygen. While there she visited the Ohio Company and found that gas in large cylinders could be sent to San Francisco at half the cost per gallon of that in the small cylinders. So it was arranged that the gas should be shipped from Ohio, and the cylinders received were stored in the basement of the apartment building where Doctor Palmer resided. After two years a distributing office was opened in San Francisco. Eighty dollars for a cylinder containing 3,200 gallons was paid for those sent to California from Ohio.

In 1924, Dr. Donald Baxter began the manufacture of nitrous oxide in Glendale. Doctor Palmer visited his plant and was satisfied that the quality

was equal, if not superior, to that then in use. A price of \$54 a cylinder, plus the freight charge, was paid. After Doctor Baxter established the Certified Laboratories Products Company in San Francisco, the price was reduced to \$40 a cylinder on a contract with Stanford. As the cost of manufacture lessened, the price of nitrous oxide became lower, until it is now about \$23 a cylinder.

The original charge to the patient was \$10 an hour. The business manager of the Hospital complained to Doctor Somers, then the medical director, that \$200 had been spent on gas in the year 1911, but the monthly report showed that more than that amount had been received by the Hospital. By using the tailings for induction, a surplus developed so that one of the sources of income for the Hospital was from this charge. The cost to the patient was then reduced to \$6 an hour. After the introduction in 1935, and the increase in use of the absorption technique, a further saving was possible, allowing another reduction in charge for gas. A blanket charge of \$2.50 is now made for every anesthetic procedure exclusive of locals.

Many times patients whose physical condition required a less toxic agent could not receive it because of the prohibitive price. The blanket charge at present assures a satisfactory income to the Hospital to cover the cost of machines, equipment, and agents. Thus an enviable goal has been reached. Every patient can now receive the agent or agents best suitable to his physical condition and the operative procedure, without being hampered by the question of cost.

In conclusion, permit me to quote from Doctor Palmer's chairman's address in 1933 on "The Future of Anesthesiology as a Medical Specialty": "The members of the anesthetic department in the institution with which I have the honor to be connected have reason to feel fortunate in the attitude toward anesthesiology of the medical school authorities, surgeons, internists, and hospital executives."

2400 Pacific Avenue.

EARLY CARE OF SEVERE THERMAL INJURIES*

By H. McCORKLE, M.D.
San Francisco

SEVERE thermal injuries are of rather frequent occurrence on large emergency hospital services, and they occur often enough in private and industrial practice to deserve the attention of surgeons everywhere. One may review the contributions made in the past few years by surgeons and physiologists and say, with confidence, that much has been done to improve both the local and the general aspects of the care of burned patients. To these contributors we must acknowledge a debt, and to them we look for further progress in the future.

* Read before the Section on Industrial Medicine and Surgery of the California Medical Association at the sixty-ninth annual session, Coronado, May 6-9, 1940.

From the Department of Surgery, University of California Medical School, and from the San Francisco Hospital.

PAIN AND SHOCK

The immediate concern of the surgeon who must treat a severely burned patient is the control of pain and shock. The patient is not removed from his original emergency dressing until shock and pain have been alleviated. An effective dose of sedative (morphin for adults, codein for children) is given. The patient is put in a warm place and additional heat is applied as indicated. A transfusion of blood is arranged at once and, in cases where shock is not otherwise controlled, is given before local treatment is instituted. The general appearance of the patient, the blood-pressure readings, and pulse observations are the criteria for decision as to when local treatment may be started. Under no circumstances is the local treatment begun before the surgeon is certain that the primary shock has been overcome.

LOCAL TREATMENT

The basis of our present local treatment of second- and third-degree burns is the tannic acid method of Davidson, with the addition of silver nitrate as described by Bettman. Following a favorable response to shock therapy, the original dressing is gently removed from the patient. If the original dressing is one of the tannic-acid jelly preparations, or simply sterile dressings, or even a clean sheet, we are indeed grateful to the referring physician. If, however, the original dressing contains some sort of grease, it is necessary to remove it with ether. The patient is then placed in a tub of comfortably warm water, to which tannic acid powder (enough to make the water appear muddy) has been added. The skin is cleansed with sterile green soap and water. With scrubbed hands encased in sterile gloves, and with sterile instruments, the operator removes blisters and loose epithelium as the patient lies in the tub. The patient remains in the tub usually for about thirty minutes, during which time the fluid may be changed once or twice. He is then placed on a sterile sheet and dried with sterile towels. The partially tanned burned areas are then treated with 10 per cent silver nitrate solution, which is applied with gauze pledgets. This causes some temporary smarting. In a few minutes a coagulum is obtained that would require twelve to forty-eight hours with the tannic acid spray method. The unclothed patient is then placed in bed on a sterile sheet under a light cradle that is kept comfortably warm at about 85 to 88 degrees Fahrenheit. This also serves to dry the coagulum. At frequent intervals (about every two hours) the burned areas are sprayed or sponged with one per cent aqueous gentian violet solution. The application of gentian violet is continued for several days, as it seems to prevent or minimize the occurrence of bacterial infection in the fissures that form at the margins of the tan and in the flexion creases. If a burn completely surrounds an extremity, it is usually expedient to split the coagulum over its entire length. This prevents ischemia of the limb, which might result as the coagulum dries and contracts. It may be split readily with a sterile scalpel and the defect sprayed as described above with gentian violet solution. It

has been found in practice that the fingers, toes, face, ears, genitalia, and anal regions do not tan well. The coagulum splits and separates in these areas. For this reason, in severe burns which include these regions, the tan is not extended into these areas. Instead, they are treated entirely with gentian violet solution.

If the preliminary cleansing has been done carefully and with aseptic precautions, infection beneath the coagulum rarely occurs. However, when it does occur, the tan must be removed and the infection treated. We usually employ saline compresses (changed frequently) or warm saline soaks followed by the application of fine mesh antiseptic grease gauze dressing. In most instances, however, gross infection does not develop.

GENERAL CONDITION

As soon as the work of tanning has been accomplished and the patient is in his bed, his general condition again becomes the primary concern of the surgeon. This has to do chiefly with the prevention and treatment of the so-called "burn shock" or "toxemia." While it is of real clinical value, as well as of scientific interest, to have laboratory determinations of blood and urine chlorids, blood proteins, carbon-dioxid combining power, hematocrit, nonprotein nitrogen, and so forth, carried out, it is not always practicable or possible. Much valuable information can be obtained, however, in every case by the simple daily determination of the hemoglobin, complete blood count, and urinalysis, including specific gravity readings of urine. It is also desirable to have a complete chart of the fluid intake and output, including an estimation of the amounts of emesis, perspiration, involuntary stools, and so forth. For this purpose special nursing is essential.

During the hours following a severe burn there is an extravasation of blood plasma into and about the burned area, and probably also into the tissues of other parts of the body. Apparently this is caused by increased capillary permeability, and results in loss of fluid, electrolytic substances, and protein from the blood stream. This, in turn, causes diminished blood volume, decreased cardiac output, vasoconstriction, circulatory stagnation, tissue anoxia and, in severe and untreated cases, circulatory failure and collapse. Clinically, this state is manifested by an elevated hemoglobin and erythrocyte determination, edema and vesicle formation at the burned area, alterations in the blood chlorid and protein values, and occasionally oliguria. There may also be lethargy on the part of the patient, and evidence of impending circulatory collapse, as measured by blood-pressure determinations and the quality and rate of the pulse, and a blotchy livid cyanosis of the skin.

Recent work (Trusler et al.) indicates that an excessive intake of water aggravates the above described condition of burn shock. Treatment of this phase, therefore, is directed toward the provision of a correct fluid balance with the addition of required salts and protein substances. The hemoglobin, erythrocytes, and urine are studied daily, together with the charted fluid intake and output.

For the first day a fluid intake of not more than 2000 to 2500 cubic centimeters for children, and not more than 3000 to 3500 cubic centimeters for adults, has been found adequate. Usually, similar daily amounts will be satisfactory for the ensuing two or three days; but they may be adjusted according to the needs of the patient as determined by the above-described studies. Often these amounts of fluid are taken easily by mouth. If only small amounts are vomited occasionally, additional fluids may be given as necessary. Where vomiting is continued or excessive, the fluids must be given parenterally, as glucose and saline solution. The amount of urinary output (500 cubic centimeters and preferably more, daily), the specific gravity of the urine, the moisture of the tongue, and the texture of the skin are practical means of estimating adequate hydration. Excessive amounts of fluid produce edema and may go on to cause a state of "water intoxication" with weakness, edema, muscular twitchings, and even coma and death. The amount of fluid, therefore, is carefully regulated, and the patient is neither given too much parenterally nor allowed to drink to excess.

As previously mentioned, a transfusion may be given to the patient soon after admission, to combat shock. When this is not done at entry, it is always done within a few hours after the tanning has been completed. When the loss of plasma has been great, as evidenced by high hemoglobin readings, the blood is administered preferably as a plasma or serum transfusion. Subsequent transfusions of blood plasma are given at least every twenty-four hours until the hemoglobin and erythrocyte readings approach normal. This ordinarily begins to take place after about seventy-two hours with the patient under treatment.

Usually the patient is able to take fluid nourishment in the first twenty-four to seventy-two hours, and may even eat a soft or regular diet. If not, parenteral administration of glucose is used to supplement the fluids, chlorids, and transfusions until eating becomes possible.

Sedation is necessary to control the initial pain in severely burned patients. After the tanning has been completed and the patient placed in bed, sedatives should be given only when necessary. Heavy sedation is always contraindicated in the very young and in the aged, and should be limited in all severely burned persons, because it may contribute to circulatory stagnation and tissue anoxia. This is especially true during the first seventy-two hours, when danger from the so-called "toxemia" or "burn shock" is maximum.

When the most dangerous period of the first few days has passed, the vigilance of the surgeon should not be suspended. It is important that the nutrition of the patient be maintained by adequate dietary measures, and that the red blood cell count and hemoglobin be kept at a high level by administration of iron and by transfusions of whole blood if necessary.

In areas of second-degree burns, the epithelium is restored rapidly and the coagulum begins to separate on about the seventh to the tenth day, and may be completely cast off by the fourteenth to

the twenty-first day. Areas of tan covering, third-degree burns may not separate, and if they adhere beyond the third week following the burn, they are removed surgically under light general anesthesia. The resultant granulating areas are then prepared for skin grafting with saline compresses or baths, or by the use of daily compresses of one of the chlorin antiseptics, preferably azochloramid. It is desirable to have the grafting of the skin done at the earliest opportunity.

University of California Hospital.

OBSTETRICAL COMPLICATIONS*

MAJOR COMPLICATIONS ENCOUNTERED IN 10,708
OBSTETRICAL CASES IN THE UNIVERSITY
OF CALIFORNIA HOSPITAL

By PURVIS L. MARTIN, M. D.
San Francisco

THE treatment of obstetrical cases in the University of California Hospital, under the direction of Dr. Frank W. Lynch, has been essentially conservative in character. Methods of delivery naturally have been changed, from time to time, as a result of efficiency studies essential in a clinic designed primarily for teaching and research. The major change in treatment followed Dr. Alice Maxwell's¹ reviews of the contracted pelvis in this clinic prior to 1927, which showed too high a fetal and maternal mortality when labor pains were insufficient to completely dilate the cervix, yet exhaustion had occurred, indicating surgical intervention. Our four-year experience with the low cesarean operation by that time indicated that the procedure could be used after a certain amount of trial labor. We then did more cervical cesareans, and consequently fewer high forceps in such cases.

This present study, likewise, is intended chiefly as an efficiency study. It was planned primarily to review the cases delivered since Doctor Maxwell's study to determine to what extent our therapy had improved, and to evaluate various factors that had helped reduce our maternal and fetal mortality.

MATERIAL FOR THIS STUDY

The series comprises 5,780 cases treated between 1927 and 1937, inclusive. I had hoped to use, as a control series, the major complications occurring in the 4,928 cases delivered between 1916 and 1926, inclusive, but the "breakdown" of many of the groups of complications showed that there were often too few cases to permit direct contrast with mathematical accuracy. So, under most headings I have studied the complications in two series totaling 10,708 women delivered from seven months' pregnancy to term. All deaths occurring earlier in pregnancy, however, are included in the tabulations.

In order properly to describe our material to others, the rank and file may be said to be normal-appearing, white American women, among whom there are comparatively few who are yellow or

* From the Department of Obstetrics and Gynecology, University of California Medical School.

Read before the Section on Obstetrics and Gynecology of the California Medical Association at the sixty-eighth annual session, Del Monte, May 1-4, 1939.

colored or give evidence of chronic poverty. As a whole, the very major part of the material compares with obstetrical cases usually seen in general practice. However, a definite proportion of cases, both of the older and more recent series, have been desperately sick women who have been sent here by outside physicians because it is a University Hospital, for which reason it is ideal for teaching medical students.

CLASSIFICATION

I have reviewed the material under different headings, studying the various factors which frequently interfere with labor, and have considered the relative rôles of the pelvis, the presentation and position of the fetus, the character of the pains, the size of the fetus and the soft parts as etiologic factors for major operative interference. Pregnancy-complicating disease is also reviewed.

PRENATAL CARE

This study indicates that constant effort to persuade patients to report early in pregnancy for prenatal care is bearing fruit. In recent years a larger proportion has been reporting in the earlier months of pregnancy. In 1936, 38.7 per cent of cases received more than five months of prenatal care, as compared with 6.7 per cent receiving such care in 1925. In 1936 but 21.4 per cent received less than two months of prenatal care, as compared with 37.6 per cent in 1925; and yet the figures fall far short of the ideal standard that all patients should report before the end of the third month when pregnancy, in the face of contraindicating disease, could be terminated safely from below.

TABLE 1.—*Prenatal Care*

| Per Cent of Cases Receiving Adequate Care | | |
|---|---------------------------|--------------------------|
| Year | For More Than Five Months | For Less Than Two Months |
| 1925 | 6.7% | 37.6% |
| 1936 | 38.7% | 21.4% |

CONTRACTED Pelves

Pelvic contraction, according to clinical methods of measurement and adhering strictly to classical definitions, was found in only 187 cases, or 1.75 per cent of the total series. In ninety-six of these, the pelvis was generally contracted with a diagonal

conjugate of 11.4 centimeters or less. In twenty-one cases the pelvis was funnel, with transverse outlet measurements of 7.9 centimeters or less. Thirty-six were simple flat pelves, with a diagonal conjugate of 10.9 centimeters or less, along with normal width. Nineteen were typically rachitic, and in fifteen others the pelvis had been deformed or made markedly asymmetrical from causes other than rickets.

A large proportion of the records antedated the work of Caldwell and Moloy, and consequently the older classifications of pelves were used in this study. As a rule, generally contracted pelves correspond to the small gynecoid group, flat to the platypelloid group, and funnel to the android group of Caldwell and Moloy. Hayden,² who has recently reported from this clinic a series of five hundred consecutive primiparae studied by x-ray pelvimetry and classified according to the definitions of Caldwell and Moloy, finds approximately the same per cent of contracted pelves in his group of cases.

Seventy-seven, or 41.2 per cent, of the 187 cases with contracted pelves were delivered by cesarean section. Seventeen of this number were operated upon after some degree of test of labor, and sixty women were chosen for elective cesareans performed before the onset of labor. One woman died from sepsis following a seventeen-hour test of labor in the 1916-1926 series (maternal mortality 1.3 per cent). There were no fetal deaths in the cesarean group of contracted pelves in either series.

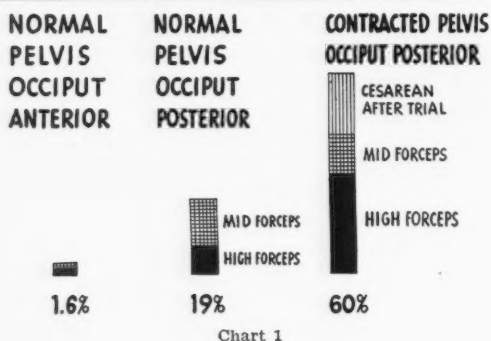
This left 110 (58.8 per cent) to deliver from below. Ninety-seven, or 88 per cent, of these delivered either spontaneously, by low forceps, or by breech, with seven stillbirths (6.3 per cent), but without maternal deaths.

Thirteen women required either mid- or high forceps for delivery; there were two maternal and eight fetal deaths. One of these maternal deaths occurred in a nonregistered patient of the earlier series, who was admitted as an emergency case with an unengaged head and a completely dilated cervix. She had had several vaginal examinations, and attempt had been made to deliver on the outside. A resident failed to deliver with high forceps and again after he had performed a craniotomy. A staff member, also failing to deliver through natural passages, performed a modified Porro section, at which time a nonbleeding rent in the uterus was discovered. The woman died four days later from peritonitis. The other maternal death occurred in an undelivered patient from a ruptured uterus. She

TABLE 2.—*One Hundred Eighty-Seven Contracted Pelves*

| Type | Number Cases | Per Cent | Cesarean | Per Cent | High or Mid-Forceps | Per Cent |
|--------------------|--------------|----------|----------|----------|---------------------|----------|
| General contracted | 96 | 51 | 26 | 27 | 11 | 11 |
| Funnel | 21 | 11 | 13 | 62 | 0 | 0 |
| Flat | 36 | 19 | 20 | 55 | 2 | 6 |
| Rachitic | 19 | 10 | 8 | 42 | 0 | 0 |
| Deformed | 15 | 9 | 10 | 66 | 0 | 0 |
| Totals | 187 | 100 | 77 | 41 | 13 | 7 |

RELATION FETAL POSITION AND PELVIS TO DIFFICULT LABOR



also was in the older series. Spontaneous uterine rupture had been diagnosed, and delivery by means of high forceps had been vainly attempted while preparations were being made for cesarean. Autopsy confirmed the spontaneous uterine rupture.

In each of the thirteen women requiring mid- or high forceps, either poor pains, posterior position, or a very large child was associated with the contracted pelvis in producing the indication for major operative intervention.

Study of these cases suggests that the majority of significantly contracted pelvises will allow of delivery from below, but the relative safety of such procedures depends upon the size and position of the child, the character of the labor and various other most important factors.

Fetal Position and Contracted Pelvises.—The relation of fetal position and pelvis to difficult labor can be readily seen in Chart 1.

Bell, in 1933,³ reported a 10 per cent incidence of occiput posteriors in a series of 7,600 cases in this clinic; but half rotated spontaneously to an anterior position. Our series closely parallels his, since we note persistent occiput posterior in 564, or 5.3 per cent, of 10,501 normal pelvises. In the 187 contracted pelvises, however, 25, or 13.3 per cent, persistent posterior positions were noted. In the group with normal pelvises and occiput posterior position, 113, or 19.1 per cent, required either a mid- or high forceps to effect delivery. But in the groups with posterior position and contracted pelvises, 60 per cent, or about three times as many, required either a mid- or high forceps, or a cesarean section after trial of labor; occiput posteriors which delivered spontaneously through contracted pelvises had either quite strong pains or small babies.

In other words, persistent occiput posterior position was more than twice as frequent in contracted as in normal pelvises, and the combination of posterior position and contracted pelvis resulted in a 60 per cent incidence of mid- or high forceps, or cesarean after trial of labor.

Poor Pains in Contracted Pelvises.—Poor pains were observed throughout labor in 22 of the 187 cases of contracted pelvises. Eleven of the twenty-two were delivered by cesarean section after a trial

of labor, and seven others either by high or mid-forceps. Only four of the twenty-two women who had poor pains and occiput posterior positions in contracted pelvises were able to deliver spontaneously.

Size of the Child and Contracted Pelvises.—The size of the child is another important factor in women with contracted pelvises. When the pelvis was generally contracted, the babies were usually smaller than in those with flat pelvises. Very large babies were unusual. In the entire series of 187 contracted pelvises, only seven children weighed more than 4,000 grams. These seven cases, however, occasioned much difficulty. Delivery was finally effected with high forceps in four of the seven cases, with two maternal deaths and fetal deaths in the four, all in the 1916-1926 group of cases. Cesarean sections after trial of labor were performed in two other cases, and the only patient which delivered spontaneously had extremely strong pains.

To summarize the problem of difficult labor: the choice of a method of delivery for any given cases is never complete without considering each of the five factors—pelvis, position, size of baby, character of pains, and condition of soft parts. The risk to mother and child is significantly increased when one factor is unfavorable, but is very greatly increased when two or more factors are unfavorable.

CESAREAN SECTION

Cesarean section in this clinic is performed only for precise indications. During the past thirteen years, however, the surgical mortality rate from the low cesarean sections has been so very slight (here in this clinic) that the indications for delivery by this means have been much extended. The incidence of cesarean operations in the last series of cases has doubled, yet there has been but one death in 278 cases, or .36 per cent in the 1927-1937 series. Prior to 1925 the classical cesarean was almost routinely used, but since that time it has been abandoned. We now aim to deliver, by low cesarean, women upon whom we formerly used high forceps. And yet even with our more frequent use of cesarean section (4.8 per cent) for the 1927-1937 period, we do not find need for the operation as often as do many others—5.66 per cent of all births in San Francisco, and 5.47 per cent of all births in the cities of Oakland, Berkeley, and Alameda from 1932 to 1936 were by the cesarean operation.⁴ This is in spite of the fact that many outside physicians bring many problem cases to the Hospital for delivery.

The policy of "once a cesarean, always a cesarean" has been strictly followed, and appears justified by the observation of three uterine ruptures through previous cesarean scars. One of these ruptures occurred in a patient who had previously been delivered, through a low cervical cesarean operation, by a well-qualified obstetrician, and who had had a smooth postoperative convalescence. At secondary section performed during labor in this Hospital, the previous scar was seen to have separated, allowing membranes to bulge through. The

TABLE 3.—Three Hundred Eighty-Eight Cesarean Sections

| | Num-ber | Incidence | Maternal Mortality | Fetal Mortality |
|--------------------------|---------|-----------|--------------------|-----------------|
| 1916-1926 4,928 cases | 110 | 2.23% | 7.3 % | 4.5% |
| 1927-1937 5,780 cases | 278 | 4.81% | .36% | 2.5% |
| Total | 388 | 3.62% | 2.3 % | 3.1% |
| Repeat sections | 110 | 1.03% | .9 % | 1.8% |

other two ruptures were observed under similar circumstances; each followed a previous classical type of section performed by a general surgeon.

FORCEPS

Low or perineal forceps have been applied in 8.7 per cent of the total material. No insignificant increase in morbidity, mortality, or fetal mortality has been associated with this procedure.

Mid-forceps, however, is considered a major obstetrical operation, and is limited to compelling indications, usually maternal.

High forceps performed in the first series were attended with a 7.4 per cent maternal and a 38 per cent fetal mortality. In recent years we attempt to avoid this type of delivery, preferring a cesarean operation performed early whenever it seems practicable. It is of interest that the incidental mortality attending high forceps remains unchanged in the later but much smaller series.

The incidence of mid-forceps has changed but little. The procedure has been relatively safe in the clinic's hands, but still is attended with a high fetal mortality.

The choice of an abdominal route for delivery versus vaginal delivery should include consideration of a number of factors. The excellent maternal mortality and fetal mortality rates which have attended low cesarean section in this clinic have justified our more frequent use. Yet men in this clinic are trained to perform it properly. I feel, however, that the late sequelae even of the low cesarean section, including symptoms of adhesions and mortality from subsequent sections, have not been properly presented in the literature. They should be kept in mind when determining whether to attempt vaginal or abdominal delivery. Vaginal relaxations, with necessary operative repair work of course, are frequent sequelae following instrumental deliveries.

VERSION AND EXTRACTION

Delivery by version and extraction has never been a favorite procedure in this clinic. In the 10,708 cases it has been used in only thirty-eight, and only when indication for immediate delivery was compelling. Transverse, face and brow presentations, prolapsed arms, and prolapsed cord furnished such indications in the presence of contra-indication for cesarean section. Two maternal deaths followed, both in relatively desperate cases. One died on the table with a ruptured uterus. The other died from a paralytic ileus a few days later; the chance that peritonitis was the cause of death was excluded by partial autopsy. Fifteen stillbirths occurred among the thirty-eight deliveries.

BREECH DELIVERY

Three hundred and sixty-eight breech deliveries, an incidence of 3.48 per cent, were conducted without maternal mortality, but with an uncorrected gross fetal mortality of 12.3 per cent. All antenatal fetal deaths, macerated fetuses and neonatal deaths due to prematurity are included in this percentage.

TOXEMIA OF PREGNANCY

Four hundred and eighty-one patients, or 4.5 per cent of the total material, developed a hypertension of more than 150/100 millimeters of mercury, along with varying degrees of albuminuria and edema, and are classified together as non-convulsive toxemias of pregnancy. There were thirty-three other cases which had convulsive toxemia or eclampsia. A follow-up study on this group of cases is at present being carried out and will form the basis for a subsequent report. The fact that nearly 5 per cent of all obstetric cases presented as toxemia of pregnancy warrants attention.

The basic plan of treatment for toxemia of pregnancy in this clinic has been along definitely conservative and accepted lines. Each case, however, is individualized. Cesarean section has occasionally been performed when the toxemic manifestations are not convulsive and have failed to respond to conservative treatment. It has not been performed in the presence of convulsions.

There were four maternal deaths among the 481 nonconvulsive toxemias. One woman, who had a very mild toxemia, died from sepsis, developing after her uterus had been packed to control a marked postpartum hemorrhage. Another died from a severe nephritis. A third patient died undelivered in the fifth month from acute yellow atrophy of the liver. The fourth died in the sixth

TABLE 4.—Two Hundred Sixty Mid- and High Forceps

| | Period | Number Cases | Incidence | Maternal Mortality | Fetal Mortality |
|--------------|-----------|--------------|-----------|--------------------|-----------------|
| High forceps | 1916-1926 | 54 | 1.09% | 7.4% | 38 % |
| | 1927-1937 | 13 | .22% | 7.7% | 23 % |
| Mid-forceps | 1916-1926 | 91 | 1.84% | 0 | 7.7% |
| | 1927-1937 | 102 | 1.77% | 1.0% | 9.8% |

month of pregnancy, following vaginal hysterotomy for fulminating preeclamptic toxemia.

There were thirty-seven fetal deaths in the non-convulsive group. The majority were from prematurity when pregnancy was interrupted before term.

There were no maternal deaths and five fetal deaths among the eclamptics. All the fetal deaths were in prematures.

HEART DISEASE

One hundred and twenty-two cases, or a little more than one per cent of the total series, had pregnancy complicating organic heart disease, and were allowed to reach the stage of viability. There were six maternal deaths, or 4.9 per cent mortality. Twenty-four cases, observed in the earlier months of pregnancy, were considered too poor risks from the cardiac standpoint to allow pregnancy to continue to term; in these the pregnancy was terminated by therapeutic abortion.

Sixteen of the 122 became decompensated during late pregnancy, and all of the six maternal deaths occurred among the sixteen decompensated cases.

Eighteen cesarean sections were performed in the group of 122, and fifteen of these sections were primarily for the cardiac indication. In the first series, two decompensated cases were digitalized after medical consultation, and cesarean sections were performed. Both patients died of decompensation during the puerperium.

Since 1928 all cases with cardiac disease complicated by pregnancy have been followed together by both cardiologist and obstetrician. The policy has been to terminate pregnancy early in patients who give a clear history of previous congestive failure. Those who have never had congestive failures are controlled, and their activities properly limited. With the institution of this policy, the mortality rate of former years has been strikingly reduced; but one death has occurred since 1928.

DIABETES AND PREGNANCY

Pregnancy has been a complication of diabetes mellitus in twenty-one patients. There were thirteen spontaneous deliveries, two cesarean sections, and five therapeutic abortions. One maternal death occurred in the preinsulin days, a severe diabetic dying undelivered of a premature infant while in diabetic coma. There were four fetal deaths, including two delivered by the two cesareans, one of which had malformations. The undelivered maternal death and a spontaneous premature delivery complicated by severe toxemia account for the remaining two. Of the thirteen spontaneous deliveries, the average delivered 268 days after the last menstrual period. The average baby weighed 3545 grams compared with the average weight in the clinic of 3478 grams.

TUMORS AND PREGNANCY

Fibroids have not been a particularly serious complication, because there have been few cases with large fibroids. Forty-two pregnancies with fibroids reached the stage of viability. Fourteen

of these had small fibroids, noted at cesarean section performed for indications other than fibroids. In six more cesarean sections, fibroids were part of the indication, but in no case were they given as the sole indication. One myomectomy was done in the fourth month for a four-pound tumor; the pregnancy proceeded to term and a viable child was delivered by cesarean section. Excepting for three breeches (7 per cent), the presentations were cephalic.

Only three pregnancies associated with ovarian tumors have been allowed to go to term. Each of these tumors, including one dermoid, one pseudomucinous cyst, and one single cystoma, were removed at cesarean section at term.

POSTPARTUM HEMORRHAGE

An estimated postpartum blood loss of 600 cubic centimeters or more has been recorded in 230 cases, an incidence of 2.15 per cent. Ninety-eight (43 per cent) of the hemorrhages followed an operative delivery.

Manual removal of the placenta was carried out in fifty cases, though in but twenty-seven of them was hemorrhage the indication. The time factor alone was given as the indication in ten cases; shock or poor general condition in six cases; placenta previa in three cases; no indication given in three cases.

ANTENATAL BLEEDING

It is extremely difficult to determine the exact cause of antenatal bleeding, especially when there is only relatively slight bleeding. In sixty-seven cases, however, bleeding of significant amount was definitely due to premature separation of a normally implanted placenta. In forty other cases the bleeding was due to placenta previa. In the entire group of 107 cases, twenty cesarean sections were performed. Voorhees bags were used to control hemorrhage in twenty-four cases. In recent years, no manipulations or vaginal examinations were carried out in this group of cases until cross-matched donors were available, and preparations for immediate laparotomy were complete. Probably as a result of such precaution, and other improvements in postoperative care, there has been but one maternal death in the 1927-1937 series. On the contrary, there were six deaths during the 1916-1926 series. The death in the later series resulted from puerperal sepsis that followed the use of a bag to control hemorrhage from placenta previa in a pregnancy of six months' gestation.

FETAL MORTALITY

Two hundred and seven fetal deaths occurred after the seventh month of pregnancy in the 1927-1937 series, a gross mortality rate of 3.6 per cent. There were thirty-two macerated fetuses, and eleven babies with very definite malformations. There were also eighty-seven neonatal deaths during the nursery period, sixty of which were in premature infants. Subtracting the macerated fetuses, monsters and neonatal deaths associated with prematurity, leaves a corrected stillbirth delivery rate of 1.8 per cent.

MATERNAL DEATHS

| 1916-1926 | 4928 CASES | 1927-1937 | 5780 CASES |
|--------------|-------------------|-----------|-------------------|
| SEPSIS | 8 CASES | 2 CASES | |
| HEART | 4 CASES | 2 " | |
| RUPT. UTERUS | 2 CASES | 1 CASE | |
| PARAL. ILEUS | 2 " | 1 " | |
| EPID. INFLU. | 2 " | | |
| HEMORRH. | 2 " | 1 " | |
| TOXEMIA | | 3 CASES | |
| DIABETES | 1 CASE | | |
| SCARLET F. | 1 " | | |
| ANESTH. | 1 " | | |
| PULM. EMB. | | 1 CASE | |
| PNEUMONIA | | 1 " | |
| | 23 DEATHS .46% | | 12 DEATHS .21% |

Chart 2

MATERNAL MORTALITY

In the period from 1927 to 1937 inclusive, there were twelve maternal deaths. Two were in nearly terminal toxemia cases referred from outside sources. From a basis of 5,780 deliveries during this period, this gives an uncorrected maternal mortality of .21 per cent, or an uncorrected maternal death rate of 21 per 10,000 deliveries. This compares favorably with twenty-three deaths in the 4,928 cases, a maternal death rate of .46 per cent.

DISCUSSION AND SUMMARY

An improvement in obstetrical management in the University of California Hospital is evidenced by a maternal mortality rate of .21 per cent during the second eleven-year period under study. This rate represents a considerable drop from the maternal death rate encountered in the preceding eleven-year period.

Several of the factors that have helped to bring about the lowered mortality rate have been revealed in this study. An increase in the quality and the duration of prenatal care has reduced the number of cases that entered the Hospital as poor risks and ended in desperate attempt at operative deliveries. As the result of adverse experiences in the earlier years, the various factors which may contribute toward difficult labor are evaluated more closely and earlier. Careful and earlier selection; and preparation of patients for cesarean section, have made it relatively safe in this clinic. As a result, the high maternal and fetal toll in prolonged labors terminated by high forceps, the difficult midforceps, and the versions of former years, are no longer observed. Heart disease complicated by pregnancy is carefully studied and carefully controlled through the coöperation of both cardiologist and obstetrician. Pregnancy is not allowed to continue in the poorer cardiac risks. Deaths from placenta previa and premature separation of the placenta have probably been prevented by careful preparation before institution of treatment.

CONCLUSION

Conservatism in obstetrical management remains the policy of choice, as is evidenced by the .21 per cent uncorrected maternal mortality and the 3.6

per cent uncorrected and 1.8 per cent corrected fetal mortality obtained in 5,780 cases, and this in a teaching hospital. There were 80.5 per cent spontaneous, 3.2 per cent breech, and 16.3 per cent operative deliveries, including low, mid- and high forceps, versions, and cesarean sections.

University of California Hospital,
San Francisco.

REFERENCES

1. Maxwell, A. F.: Study of Labor in Contracted Pelves, J. A. M. A., 89:2088-2090 (Dec. 17), 1927.
2. Hayden, C. T.: (To be published.)
3. Bell, T. F.: Occiput Posterior Position: Review of Seven Hundred Sixty-Six Cases, West. J. Surg., 41:563-573 (Oct.), 1933.
4. Bell, T. Floyd: A Study of Maternal Mortality in San Francisco, Oakland, and Berkeley, 1932-1936. Read before the San Francisco Obstetrical Society in 1937. (To be published.)

DISCUSSION GROUPS AS AN ADJUNCT TO PSYCHOTHERAPY*

By MELVIN R. SOMERS

AND

PEARL S. POUPPIRT
San Francisco

TODAY a paradox exists in psychiatry. Although a steadily increasing number of psychoneurotic individuals seek treatment, a steadily decreasing proportion of them receive the benefit of modern advances. This state of affairs has been brought about because the trend in psychotherapy has been toward the adoption of procedures necessitating the expenditure of an increasing amount of time with each patient. Utilizing the old-fashioned symptomatic psychotherapy, a single psychiatrist could take care of a large number of patients. With modern time-consuming procedures, comparatively few patients can be treated; therefore costs are high.

If means can be devised whereby several individuals can be given treatment simultaneously, the time, and, therefore, the economic obstacles to the modern approach can in part be overcome. With this end in view, during the past two and a half years we have been employing a form of group reëducational psychotherapeutics as a supplement to personalized psychotherapeutic procedures.

The idea of applying psychotherapy simultaneously to a group of individuals is not new. In the limited time at our disposal we shall not go into the history of various methods that have been employed, but instead shall describe the method we have evolved and have found particularly successful in the treatment of selected cases.

MATERIAL

During the past two and a half years we have conducted 260 discussion groups of one hour each. Fifty-six patients have attended a varying number of such sessions, averaging nineteen per patient. The age range has been from twenty to seventy, with 90 per cent between twenty-five and forty-five

* Read before the Neuropsychiatry Section of the California Medical Association at the sixty-ninth annual session, Coronado, May 6-9, 1940.

years of age. Each group has contained both sexes, all American-born and white. The range of educational background has been from one who failed to complete the sixth grade in grammar school, to professional people with advanced college degrees. The economic status varied from a clerk with a salary of \$100 per month to an individual with a private income of \$30,000 per year. The occupations included most of the usual ones of the Pacific Coast region. No attempt was made to assign patients to groups on the basis of age, sex, economic, educational or social background, but some attention was paid to the general intelligence level.

METHOD

The patients meet once each week at a convenient time after regular office hours. We usually advise them to bring the individual most concerned with their problems; for example, the husband accompanies the wife when the latter is the patient. We have found that ten to twelve people is the optimal size for a group. A fewer number usually means less group spirit, and in a larger gathering the timorous individual is frightened. Every effort is made to keep the meeting informal but dignified, and to avoid direct reference to the specific problems of those present.

Every patient is carefully studied before he joins the group, and personal conferences are held with him throughout the course of the therapy.

At the beginning of the first meeting of the group the psychiatrist emphasizes that he is to act as a leader only because of his specialized training. It is made clear that each one present is to take an active part in the group discussions so that all, working together, may achieve a clearer understanding of human behavior.

The first two group sessions are spent by the leader in bringing out each member's opinion of the factors considered by him to be important in an evaluation of an individual's makeup. All the members are encouraged to enter into the discussion, and their ideas, expressed in their own words, are listed and arranged in a systematic outline. It is then found profitable to present for discussion a simple case history. The outline devised by the group is utilized for a study of the patient and his reactions. The case presentation is prefaced by a statement that, without altering essential factors, some details of the history have been changed so as to make identification of the subject impossible. One selects a case history in which the mechanism of the development of symptoms and the therapeutic approach can be readily understood. With the added encouragement derived from the successful solution of one problem, the group is receptive to a more complete study of the individual.

At this point a general analysis of the causes of biologic behavior, interpreted in the light of environmental influences acting through conditioned reactions, is the most useful method of stimulating further discussion.

A brief explanation of the form and function of the nervous system follows, and an exposition of the interrelationship of the emotional responses

of the individual to his physical condition as a whole.

We have found it advisable next to outline the development of the early years of an individual's life as interpreted from the standpoint of psycho-analytical concepts. We frequently remind the group that in presenting any viewpoint the psychiatrist is neither advocating nor condemning it. It is emphasized that he considers no one viewpoint is adequate for a complete interpretation of human behavior. An outline of psycho-analytical concepts is always of interest and productive of much discussion, which is the primary purpose of the psychotherapeutic group. Elementary psycho-analytical terms are introduced. Oral and anal erotic traits, the Edipus conflict with the attendant castration fears, ego cathexis, fantasy cathexis and object cathexis, are defined and discussed. We use the commonly accepted terminology, and in all discussions bodily parts and functions are spoken of with the utmost frankness. No attempt is made to avoid any details. Experience has shown that if this course is not followed there is an exaggeration of repressions and inhibitions which will at once be manifested by a lack of responsiveness in the group as a whole. This didactic method seems to be unavoidable, but should be limited as much as possible and should be frequently interrupted so as to encourage discussion. Four or five hours is as a rule ample time to lay the groundwork for a talking knowledge. Progress will at once be evidenced by a renewed discussion of previously presented cases and incidents personally observed by members of the group. This is always a favorable sign, but the conductor of the group must see to it that no member is permitted to monopolize the discussions or to remain passive.

At this stage one can expect the overt homosexuals, especially of the aggressive type, to drop out of the group. We have found it impossible to keep such individuals attending without greatly retarding the development of the other members.

As soon as the psycho-analytical viewpoint is made clear, and it is evident that the group is able to make some use of it in their thought processes, a case or two taken from the literature, illustrating the simple concepts of oral erotic and anal erotic character traits, serve as ideal material for discussion. No attempt is made to study any such material exhaustively. Since the purpose of the group is to encourage an objective consideration of the problems of human behavior, it is unnecessary to attempt a complete analysis of cases. However, the group must be urged to go into a case to the fullest depths their knowledge warrants. During the discussion of the psycho-analytical cases material the psychiatrist leading the group seizes such opportunities as present themselves to point out environmental influences and to bring them up for discussion.

It is usually a simple matter to lead the discussion from psycho-analytical concepts to psychological ones, special stress being laid upon environmental influences.

The group is then encouraged to examine the environment in the same systematic way that it

TABLE 1.—Results of Group Reëducational Psychotherapy in Fifty-Six Patients

| Diagnosis | Number of Cases | Results | | | | | |
|--|-----------------|---------------|----------|----------|----------|------------|----------|
| | | Much Improved | | Improved | | Unimproved | |
| | | Number | Per Cent | Number | Per Cent | Number | Per Cent |
| Schizophrenia | 2 | | | | | 2 | 100 |
| Overt homosexuality | 2 | | | | | 2 | 100 |
| Constitutional psychopathic inferiority (character problems) | 4 | | | 3 | 75 | 1 | 25 |
| Latent homosexuality | 9 | | | 9 | 100 | | |
| Chronic alcoholism | 2 | | | | | 2 | 100 |
| Sexual perversion | 1 | | | 1 | 100 | | |
| Sexual impotency (male) | 1 | 1 | 100 | | | | |
| Compulsion neurosis | 2 | | | 2 | 100 | | |
| Anxiety neurosis | 5 | 2 | 40 | 2 | 40 | 1 | 20 |
| Conversion hysteria | 6 | 3 | 50 | 2 | 33 | 1 | 17 |
| Neurasthenia | 11 | | | 6 | 55 | 5 | 45 |
| Mixed neurosis | 11 | 1 | 9 | 8 | 75 | 2 | 18 |
| | 56 | 7 | 13 | 33 | 57 | 16 | 30 |
| Normals | 9 | | | | | | |

examined the individual personality, and in the same manner a list is made of the factors which each person considers important. Here again we have found it necessary to interject a few didactic lectures.

The evidence of environmental influences is presented from the fields of general human ecology, geography, geology, ethnology, anthropology, and history of human customs. As illustrative of the influence of environment upon human beings, one can point out the well-known contrasting customs of the plains people and the mountain people. It is useful to have a globe of the world in the room, together with maps showing the distribution of various environmental factors, such as isothermal maps, maps of rainfall, prevailing winds, plant distribution, etc. We have found that few patients maintain a sustained interest in an analysis of the environment without considerable encouragement; so maps, working models, and diagrams are essential. Illustrative examples drawn from history of the settlement of the United States, and especially local conditions with which the patients are familiar, are important details to be analyzed.

Whenever possible, cases or examples that have come to the knowledge of the members, with the exception of their own personal problems, are used to illustrate the points under discussion. In addition, cases that have been previously presented from other standpoints are reëxamined in the light of the psychobiological interpretation, and efforts are made to encourage the group to weigh and correlate all viewpoints.

As soon as the group can correlate the individual environmental factors, the make-up of the individual himself and his reactions, the members usually express an interest in sociological problems. They are encouraged to bring in questions for discussion, and each member of the group states his opinion as completely as possible.

The physician must always watch carefully for opportunities to present aspects of problems that are similar to personal ones of members of the group; never, of course, directly addressing the individual concerned, or in any way being obvious. In this manner not only is valuable information obtained, by observing the individual's immediate response and his reaction to his problems as disclosed in the private sessions, but indirect suggestion can be administered with ease.

A most helpful spirit of coöperation is developed on the part of whatever relative may have attended with the patient, both in encouraging the patient to continue the investigation of his own difficulties and in modifying environmental factors.

We have found that outlets for the patients, quite aside from the weekly meetings themselves, are increased. Invitations are accepted to join athletic or social groups already established by some member, or descriptions of activities stimulate the retiring ones to try them.

RESULTS

Table 1 gives a brief summary of the clinical diagnoses and final results of the series reported. "Much improved" is defined as those patients who were freed from all their original complaints and who consider themselves completely well. In addition, it is evident to the psychiatrist that the environmental adjustment is within normal limits. Because no case in this group has been followed for more than two and one-half years, we have not classified these patients as "recovered." "Improved" is defined as those cases who were freed of their original complaints, but were not normal in their environmental adjustment. Although some of the "unimproved" group received some benefit they still possessed their original complaints, and their total environmental adjustment was not normal. A small proportion of this group would be listed as "improved," or "much improved," were

we reporting results of other forms of therapy tried after it was decided to dismiss them from the discussion groups. The classification, "normals," includes physicians and other professional people who attended the groups for educational purposes.

As might be expected, one patient suffering from schizophrenia, paranoid type, seemed to be made worse by the discussion groups. The other case of schizophrenia mentioned appeared to show benefit for a few months, but refused to return to the groups and several months later experienced a re-activation of his symptoms. We have listed him as unimproved.

Aside from any direct benefit that might be said to be due to the discussion groups themselves, there was, with one exception, a marked change in the attitude of both the patients and their relatives toward psychotherapy in general. They became more frank, more cooperative, more tolerant of temporary set-backs, and less prone to demand immediate symptomatic benefits. Therefore, supplemental psychotherapy, whether given during the same period as that of group attendance or subsequently, becomes much easier. This increased willingness to cooperate with the physician, and to accept some of the responsibility for the solution of personal problems, seems to parallel the development of group spirit. Members of the group are taught from the beginning to accept responsibility, not to remain passive. Disregarding all other considerations, this change in the attitude of the patients and their relatives makes the discussion groups well worth while. Some of the patients in this series could not have been treated by individual methods alone. They reacted favorably only to group therapy, or to the administration of treatment after attending the discussion groups.

SUMMARY AND CONCLUSIONS

A method of giving psychoneurotic individuals treatment in groups has been described. The results compare favorably with those of other psychotherapeutic methods which have been published.

The advantages are: Adequate therapy can be given to those who cannot afford frequent individual office visits.

Many employed people can be seen without interfering with their regular hours of work.

Reeducation of relatives and friends can be done simultaneously with the patients' psychotherapeutic régime.

The patients obtain practical experience in group adjustment and learn to accept responsibility for solution of problems.

The psychiatrist has an opportunity to observe the patient in a social situation.

Indirect suggestion can readily be given.

Professional people, such as doctors, can be treated more easily than by other methods.

The group spirit which develops carries the individual over temporary set-backs.

Patients are aided in starting outside activities.

490 Post Street.

CLINICAL NOTES AND CASE REPORTS

EQUINE ENCEPHALOMYELITIS

A CLINICAL STUDY OF A SMALL OUTBREAK

By J. HALLAM COPE, M. D.

Livermore

AND

HARRY MAYTUM, M. D.

Merced

BEING the case histories of four proved cases, one probable case and one case of encephalitis lethargica occurring in the same hospital in the same relative period of time.

Horse encephalitis is not an uncommon disease in the San Joaquin Valley. Horse encephalitis in humans, in the limited experience of the authors, does not seem uncommon either.

Evidently a central nervous system disease, with unusual onsets, unusual symptom and sign complexes, it leads to a follow through on these cases, with a resultant positive diagnosis.

Anterior poliomyelitis, encephalitis lethargica, equine encephalitis, and benign lymphocytic meningitis, were all considered as diagnosis in these cases. Positive diagnosis was made through Dr. Karl Meyer at the Hooper Foundation by means of specific blood reactions made at the Foundation.

The four proved cases—the one probable case and the one case of encephalitis, St. Louis type—are given to show the similarity in common findings and the difficulty of diagnosis without specific laboratory aid such as that obtained at the Hooper Foundation.

REPORT OF CASES

CASE 1.—White male, age 15.

C. C.—Headache, backache, soreness in neck and malaise four days. Weakness in right leg one day.

P. I.—Four days before entry he went to a moving-picture show, and on leaving had a headache which continued unabated. Since, he had gradually developed soreness in the neck, and backache. The day before entry bladder paralysis developed, coupled with weakness in right leg. He lived on a farm where two horses, which had not been sick, were used.

P. E.—Positive findings of distended bladder—up to umbilicus. Right arm and forearm questionably weak. Paralysis of right leg, complete in both flexor and extensor groups. Reflexes were normal on left, decreased on right and absent in right leg.

Temperature on entry, 102 degrees; pulse, 104; respiration, 20.

On the third hospital day the temperature, pulse, and respiration gradually fell to normal and remained so. Bladder function returned, and there was a slight improvement in right leg weakness.

Laboratory:

First Day.—Spinal puncture on entry: fluid was clear; pressure, 196 millimeters of water. Cell count, 138; 99 per cent lymphocytes.

Second Day.—Cell count, 25; 95 per cent lymphocytes; spinal-fluid sugar, 71 milligrams per 100 cubic centimeters of fluid.

Third Day.—Cell count, 78; 96 per cent lymphocytes.

Fifth Day.—Cell count, 20; 100 per cent lymphocytes.

Sixteenth Day.—Cell count, 12; 100 per cent lymphocytes.

Urine: On entry, urine was negative. Developed cystitis during catheterization, which had cleared on discharge from hospital.

Blood: Was negative for St. Louis type of encephalitis, and positive for equine encephalitis.

On discharge, could not lift right heel off bed.

CASE 2.—White male, age 19.

C. C.—Pain in left chest for eight days. Chills for one.

P. I.—Eight days before entry, while climbing stairs, he had sudden sharp pain in chest, with dyspnea. Pain continued, but not severely enough to keep the patient from work. A chill the night before entry forced the patient to bed.

P. H.—Patient had come to California from Tennessee a little over two months before entry, and had been working on ranches in the San Joaquin Valley. For the past two weeks had had a job in a hay-field, working with four horses, none of which were sick.

P. E.—First Day: Physical examination was negative except for chest, where friction rubs were heard at both bases on entry. Breath sounds were normal. The patient was having much chest pain, although chest plate was negative.

Second Day.—Complained of headache and pain in back. Diaphoresis was profuse. Developed bladder paralysis and had to be catheterized. Spinal puncture was done. On the fourth hospital day, bladder function returned. Patient's temperature, which was 104 degrees on entry, came down by lysis to normal on the fifth hospital day. However, the patient ran a daily elevation, at times as high as 101 degrees, until five days before discharge on the twenty-ninth hospital day.

Pleural friction rub heard on the first day was not heard on the second day. Soreness and stiffness of neck found, and suggestion of Kernig's present on second day.

Laboratory:

Spinal on second day: pressure, 150; fluid clear; cell count, 2; 1 lymphocyte; sugar, 67 milligrams.

Third Day.—Cell count, 3; all lymphocytes.

Sixth Day.—Cell count, 21; 97 per cent lymphocytes.

Eighteenth Day.—Cell count, 16; 100 per cent lymphocytes.

Wassermann was negative.

On entry: Hemoglobin, 75; white blood count, 15,100; 77 per cent polymorphonuclears.

Blood serum was positive for equine encephalitis, and negative for the St. Louis type.

CASE 3.—White male, age 22.

C. C.—Headaches.

P. I.—Entered hospital with no other complaint but persistent headaches and malaise.

P. E.—Physical examination revealed soreness of neck without true rigidity. There was a suggestion of Kernig's and bladder paralysis on entry. Examination was otherwise negative, and bladder function returned on second day. Headache persisted for nine days after entry. Temperature on entry was 101.6 degrees, pulse 108, respiration 22. On ninth hospital day temperature hit normal, to remain.

First Day.—Spinal on entry: fluid clear, cell count, 9; all lymphocytes.

Third Day.—Cell count, 55; 95 per cent lymphocytes.

Seventeenth Day.—Cell count, 37; 97 per cent lymphocytes.

Urine was negative.

Spinal fluid was negative for both equine and St. Louis type of encephalitis.

CASE 4.—White male, age 37.

C. C.—Since tonsillectomy, three weeks before entry, for peritonsillar abscess, had been getting weak, and for three days before entry had chills and fever. Past history of working two horses on truck farm, which was infested with mosquitoes.

P. E.—Patient looked toxic and was sweating profusely. His throat was well healed. Some râles were heard at the base of the left lung. Heart was negative. No stiff neck nor Kernig's present.

Course: On second hospital day the patient complained of soreness in his neck and a headache. He was sleepy and took nourishment poorly. Headache persisted up to the tenth day, with no complaints from that day to discharge on the twenty-first day.

Temperature on entry was 103.6 degrees, but fell abruptly to normal on the second evening and remained so for the

rest of his hospital stay. The pulse was consistently slow (between 60 and 80) except on entry, when it was 108 degrees. Respirations were 26 on entry, but as soon as the temperature reached normal, respirations fell to 16 and 18.

Laboratory: Urine negative, Wassermann negative.

Spinal fluid on third hospital day showed 107 cells with 97 per cent lymphocytes.

White blood count on sixth hospital day was 9,900 with 73 per cent polymorphonuclears and 6 per cent eosinophils.

Spinal fluid on seventh hospital day showed 111 cells with 98 per cent lymphocytes.

Blood was positive for equine encephalitis, and negative for St. Louis type.

CASE 5.—White female, age 32.

C. C.—Chief complaints on entering hospital were frontal headache for four days and drowsiness for two days. Family and past history had no bearing on present illness.

P. I.—Patient was working in peaches when she started to complain of headache, which became worse next day. On the third day of illness, she complained of being sleepy and from that time on remained in bed. On the fifth day she was stuporous and became irrational in the evening. On the sixth day she entered the hospital. There was no history of proximity to horses.

P. E.—Young female lying in bed; restless and irrational. Pupils equal and react to light. Examination of fundi impossible, because of mental condition of the patient. Oral examination, normal. Chest was clear. Heart normal. Blood pressure, 102/84 and of poor quality. Abdominal examination was negative. No muscle weakness noted. Reflexes were equal and active. Suggestion of Kernig's present. Spinal puncture revealed clear fluid under pressure of 140 millimeters of water, and 247 cells found, of which 95 per cent were lymphocytes.

White blood count, 10,100; polymorphonuclears, 77; lymphocytes, 23.

Sedimentation time was 23 millimeters fall in one hour. Urine showed a trace of albumin, with a few granular casts.

Spinal puncture on the fourth hospital day revealed clear fluid under 180 millimeters of water, and there were 80 cells in spinal fluid, of which 97 per cent were lymphocytes. Spinal fluid sugar was 68.8 milligrams.

Wassermann was negative.

Spinal fluid was positive for horse encephalitis, and negative for St. Louis.

The temperature came down from entry level of 102.8 degrees by lysis to normal on the fourth hospital day and remained so. The pulse came down from 120 to 80.

Course: Patient was irrational on entry and had to be catheterized the first two days in the hospital. On the fifth day she became cognizant of her surroundings. At about this time she started to complain of nausea and dizziness. A slight nausea persisted up to the time of discharge. At the time of discharge the patient was nervous and had the suggestion of a "Parkinsonian mask."

CASE 6.—White female, age 15.

C. C.—Pain in the back and left side, one day; headache, one day; weakness in arms and legs, one day.

P. H.—Patient had been living in fig camp for one week, where two horses were used.

P. I.—On morning of entry, the patient had a sudden onset of pain in the left flank and back, with a slight headache. About an hour later a gradual weakness of arms made her unable to lift them. In the afternoon her legs began to weaken. Last B. M. at 9 a. m.

P. E.—Patient's speech was thick, although palate was normal. Bilateral weakness of deltoids, biceps and all other upper extremity muscles completely out. No headache or neck stiffness. Bladder was distended to umbilicus. Complete flaccid paralysis of lower extremities. Kernig's were negative. Patellar reflexes were absent. Incontinent of feces. The patient continued worse and never regained bladder control. Paralysis progressed to involve intercostal muscles.

Patient had two convulsions on the morning of the eighth hospital day, and died during the third convulsion.

Temperature on entry was 103.4 degrees; pulse, 100; respiration, 20.

Temperature remained high the first three days: 104

degrees; 105 degrees; down to 101 degrees, then 105 degrees at the time of death.

Spinal punctures: On entry, fluid clear; pressure, 110 millimeters of water; found 3 cells; 1 lymphocyte; sugar, 72 milligrams.

Third day: One cell; lymphocyte.

Blood: Wassermann was negative.

Red blood count, 3,490,000; 65 per cent hemoglobin.

White blood count, 14,350; polymorphonuclears, 79.

On entry: Hemoglobin, 72 per cent; white blood count, 12,750; urine was negative.

Blood was positive for St. Louis type of encephalitis, and negative for equine encephalitis.

COMMENT

From the foregoing, it would seem that the diagnosis of encephalitis equinus can be only a provisional diagnosis. While the diagnosis may be suspected because of the unusual sequence of events or the picture of a central nervous disease that does not quite fit poliomyelitis or epidemic encephalitis, positive diagnosis rests on available blood reactions.

Bladder paralysis and pain (not stiffness) in the neck were the most constant findings. Frontal headache was also present in most. Suggestive Kernig's were found in most cases.

In review of the cases, the mode of onset varies in every case, *i. e.*, it may be sudden or gradual.

The temperature curve was not the same or at all similar in any two cases, but all had temperature elevations. The white counts varied from 9,000 to 16,000, and the polymorphonuclear percentages varied from 69 to 91.

The spinal fluid cell counts in all cases diagnosed, horse encephalitis varied from 3 cells to 247 cells, but in no one case was the highest cell count less than 21 cells.

The one case of St. Louis type encephalitis showed three cells on first spinal, and one cell on subsequent spinal.

The differential spinal fluid cell count was always 95 per cent, or over, lymphocytes, including the encephalitis lethargica.

Spinal fluid sugar in all cases was normal.

Blood serums as reported by the Hooper Foundation were either positive for encephalomyelitis equinus or St. Louis type, never for both. In one case the report was negative for both types. This case occurred while two other cases of horse encephalitis were in the hospital; the picture was very similar and diagnosis was made in spite of negative blood finding at the Hooper Foundation.

SUMMARY

Encephalomyelitis equinus is not an uncommon disease, especially in the San Joaquin Valley. The disease may easily be mistaken for anterior poliomyelitis or encephalitis lethargica. In the cases presented, physical finding of bladder paralysis, soreness of the neck, frontal headaches, and suggestive Kernig's were most constant. Spinal fluid cell count varies widely, but lymphocytes are always predominant, while spinal-fluid sugars are always normal.

All areas of Merced County, from which these cases came, were heavily infested with mosquitoes, while about 50 per cent of the patients had no contact whatever with horses.

Arroyo Del Valle, Livermore.
Merced General Hospital.

A NEW TYPE OF BELT FOR SPLINTING THE CHEST*

By ROBERT A. STEVEN, M. D.
San Francisco

RECENTLY I designed a new type of belt for use in unilateral pleurisy or rib fracture, consisting of strong elastic for the sound side of the chest, and material for the side involved. One shoulder strap prevents the belt from sliding down. On to each end of one-half are sewed three long canvas straps, and on to each strap is threaded a strong eye which can be looped over hooks sewed onto the ends of the opposite half. By pulling on the straps the belt can be tightened both in front and behind.

One might think that a belt containing elastic in any part of it would allow both chests to expand equally, but this is not the case. I tested the belt first on a patient with fracture of the right seventh rib. With the belt in place the breath sounds on the right side above and underneath the belt were greatly diminished, but were normal on the left; whereas, when the belt was off the breath sounds were plain on the right, proving that the diminution of breath sounds in the first instance was not due to natural splinting following a fracture. Also, we viewed the chest under the fluoroscope with the belt in place, and the movement on the right was greatly restricted. The explanation for this fact is that friction between the skin and the belt prevents the belt from sliding, and therefore only the elastic side allows chest movement.

I have used the belt both in pleurisy and rib fracture, with relief of pain in both. The advantages over adhesive need no comment.

Other belts for splinting the chest are on the market, but they contain a strip of elastic on each side, allowing equal, though restricted movement of the two sides. An elastic bandage wrapped

* From the Department of Medicine, University of California.

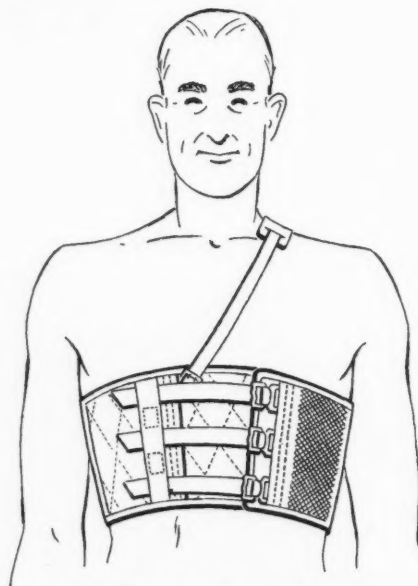


Fig. 1.—Elastic belt for splinting chest.

around the chest accomplishes the same purpose as these belts, although it will not stay in place as well.

When using the belt on a woman, it is placed as high up under the breasts as possible, but not overlying the breasts. I used one recently on a very obese woman having large pendulous breasts, with complete relief of pain. The application of adhesive on such a chest is virtually impossible.

It has been suggested to me that one might use this belt also to secure desired expansion of one chest, as, for instance, following empyema, etc., by making the belt with the elastic only on the involved side, thus encouraging expansion of this side, while restricting movement on the side that is good.

The first belt was kindly made for me and furnished by the David Fox Surgical Appliances. The illustration is theirs. The belt is usually about eight inches in width. Two measurements are necessary; the circumference at the level desired for the upper border of the belt, and the circumference eight inches below this level. The retail price of this belt should not exceed \$10. A sample belt, if measurements are given, can be obtained from the David Fox Surgical Appliance Co., 319 Mason Street, San Francisco, for the price quoted. The belt in place is illustrated in Figure 1.

334 Post Street.

HIPPOCRATES' APHORISMS*

By M. SCHOLTZ, M. D.
Arcadia

SECTION THREE

1. Changes and variations of the seasons
Are common factors leading to disease;
Transitions from a hot to chilly weather
Prepare the soil for illness with great ease.
2. Some people's nature craves more summer heat,
While others winter snow and cold entreat.
3. Diseases and the ages are related
To seasons, types of food and to locations;
This fact determines whether these two factors
Are suited well or ill in combinations.
4. When daily weather changes
From hot spells to cold,
Some morbid visitations
May be foretold.
5. South winds induce hard hearing and dim vision,
Dull head and languor; while the north winds cause
Hard bowels, sore-throat, dysuria with chills,
Coughs, pains in chest and breast and kindred woes.
6. When summer is like spring, replete with humid air,
The fevered sick excessive sweating bear.
7. The droughty summers,
With dry, torrid breezes
Are likely to bring on
Acute and fell diseases.
8. When seasons follow the pattern set by nature,
And weather runs true to a season's norm,
Diseases also run according to their patterns,
And crises come within time-limits of the norm.
9. In fall, diseases are
More fatal and acute;
In spring, they're more benign
And easier to uproot.
10. Fall is a bad season for the sick with phthisis.
11. If winter's dry, with northern winds prevailing,
And spring, swayed by the southern winds, is wet;
Then summer brings on sore eyes, dysenteries,
And agues, in humid people mostly met.
12. If winter's rainy, calm, with southern winds,
And spring is dry, and winds blow from the north,
Then pregnant women from the slightest cause abort,
Or withered feeble infants are brought forth.
Withal crop up sore eyes and dysenteries,
And the old men fall prey to nose catarrhs.
13. If summer's dry with northern winds prevailing,
And southern winds supply much rain in fall,
Then winter sows headaches, coughs, corizae
And, in some cases, even phthisis may befall.
14. If fall is dry and winds blow from the north,
With humid men and women this agrees,
But others may fall prey to sore eyes, fevers,
To colds and, in some cases, melancholies.
15. Dry seasons, as a rule,
Are healthier than the wet,
Which are more likely to
Mortalities beget.
16. Rainy seasons bring on chronic fevers,
Loose bowels, quinsies, fits, strokes and gangrene;
In dry seasons dysenteries, phthisis,
Dysurias, joint and eye troubles are seen.
17. North winds improve the hearing, brace the body,
But pinch the eyes and aggravate chest pain;
The south winds relax and slow the body,
Dull sight and hearing, and oft load the brain.
18. In spring and early summer the young bloom;
The old folks do the best in summer and early fall;
While for the people of intermediate ages,
Late fall and winter is the best of all.
19. While all diseases may occur
In any season of the year,
There're some of them that strongly tend
In certain seasons to appear.
20. Diseases of the spring are: colds and coughs,
Bleedings, quinsy, fits and spells of sadness;
Joint-troubles, leprosy and skin eruptions
With ulcers, nodules, and at times, acute madness.

* For other aphorisms, see CALIFORNIA AND WESTERN MEDICINE, March, 1940, page 125; April, 1940, page 179; May, 1940, page 231; July, 1940, page 35.

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6.

CALIFORNIA MEDICAL ASSOCIATION†

HARRY H. WILSON.....President
HENRY S. ROGERS.....President-Elect
LOWELL S. GOIN.....Speaker
PHILIP K. GILMAN.....Council Chairman
GEORGE H. KRESS.....Secretary and Editor

INDEX

1. California Committee on Medical Preparedness.
2. California State Council of Defense.
3. C. M. A. Council.
4. Committee on Public Health Education.
5. C. M. A. Department of Public Relations.
6. Committee on Postgraduate Activities.
7. California Physicians' Service.
8. County Societies.
9. Woman's Auxiliary.

CALIFORNIA COMMITTEE ON MEDICAL PREPAREDNESS*

State Chairman and Representative

Philip K. Gilman, M. D., 2000 Van Ness Avenue
San Francisco

County Chairmen and Representatives

Alameda County: C. H. Church, M. D., 2082 Center Street, Berkeley.
Alpine County: Max Isoard, M. D., 1127 Eleventh Street, Sacramento.
Amador County: Max Isoard, M. D., 1127 Eleventh Street, Sacramento.
Butte County: J. O. Chiapella, M. D., 131 Broadway, Chico.
Calaveras County: Phillip V. Lamb, M. D., Angels Camp.
Colusa County: Benjamin F. Miller, M. D., 439 Central Street, Yuba City.
Contra Costa County: Leopold H. Fraser, M. D., 134 Tenth Street, Richmond.
Del Norte County: Francis M. Stump, M. D., Crescent City.
Eldorado County: Max Isoard, M. D., 1127 Eleventh Street, Sacramento.
Fresno County: H. M. Ginsburg, M. D., Fresno General Hospital, Fresno.
Glenn County: J. O. Chiapella, M. D., 131 Broadway, Chico.
Humboldt County: Charles C. Falk, Sr., M. D., 507 F Street, Eureka.
Imperial County: John L. Parker, M. D., Bank of Italy Building, Brawley.
Inyo County: C. L. Scott, M. D., 609 Elm Street, Bishop.
Kern County: Roderick Ogden, M. D., 354 Haberfelde Building, Bakersfield.
Kings County: Charles T. Rosson, M. D., 208 North Douty Street, Hanford.
Lake County: Charles Craig, M. D., Lakeport.
Lassen County: James D. Coulter, M. D., Western Pacific Railway Hospital, Portola.

Los Angeles County: Walter A. Bayley, M. D., 4546 Circle View, Los Angeles.

Madera County: Smith A. Quinby, First National Bank Building, Madera.

Marin County: F. M. Cannon, M. D., Albert Building, San Rafael.

Mariposa County: Hartley G. Dewey, M. D., Yosemite National Park.

Mendocino County: Walter Rapaport, M. D., Talmage.

Merced County: Edward A. Jackson, M. D., Atwater.

Modoc County: James D. Coulter, M. D., Western Pacific Railway Hospital, Portola.

Mono County: C. L. Scott, M. D., 609 Elm Street, Bishop.

Monterey County: W. Rollin Reeves, M. D., 32 East San Luis, Salinas.

Napa County: Dwight H. Murray, M. D., 320 Franklin Street, Napa.

Nevada County: J. Gordon MacKay, M. D., Box 1032, Auburn.

Orange County: Fred E. Earel, M. D., 1712 North Main Street, Santa Ana.

Placer County: J. Gordon MacKay, M. D., Box 1032, Auburn.

Plumas County: James D. Coulter, M. D., Western Pacific Railway Hospital, Portola.

Riverside County: N. K. Bear, M. D., 3655 Fourteenth Street, Riverside.

Sacramento County: Max Isoard, M. D., 1127 Eleventh Street, Sacramento.

San Benito County: L. E. Smith, M. D., Hollister.

San Bernardino County: J. H. Titus, M. D., C and Euclid, Ontario.

San Diego County: Ralph Kaysen, M. D., 1301 Medico-Dental Building, San Diego.

San Francisco County: George K. Rhodes, M. D., 490 Post Street, San Francisco.

San Joaquin County: Arthur C. Boehmer, M. D., 315 West Pine Street, Lodi.

San Luis Obispo County: Fred R. Mugler, M. D., 1170 Marsh Street, San Luis Obispo.

San Mateo County: Carl D. Benninghoven, M. D., Mills Memorial Hospital, San Mateo.

Santa Barbara County: H. J. Ullmann, M. D., 1520 Chapala Street, Santa Barbara.

Santa Clara County: R. Stanley Kneeshaw, M. D., 404 Medico-Dental Building, San Jose.

Santa Cruz County: Avery Wood, M. D., 335 Main Street, Watsonville.

Shasta County: C. C. Gerrard, M. D., Redding.

Sierra County: J. Gordon MacKay, M. D., Box 1032, Auburn.

Siskiyou County: A. H. Newton, M. D., Yreka.

Solano County: John W. Green, M. D., Box 539, Vallejo.

Sonoma County: T. E. Albers, M. D., 600 B Street, Santa Rosa.

Stanislaus County: Hoyt Raymond Gant, M. D., 1024 J Street, Modesto.

Sutter County: Benjamin F. Miller, M. D., 439 Central Street, Yuba City.

Tehama County: Frank J. Bailey, M. D., 736 Main Street, Red Bluff.

Trinity County: William A. Rowell, M. D., Trinity Center.

Tulare County: Ray Edward Cronemiller, M. D., 160 South E Street, Exeter.

Tuolumne County: Henry C. Rixford, M. D., Jamestown.

Ventura County: Arlo A. Morrison, M. D., 705 Main Street, Santa Paula.

Yolo County: J. Homer Woolsey, M. D., Woodland Clinic, Woodland.

Yuba County: Benjamin F. Miller, M. D., 439 Central Street, Yuba City.

†For complete roster of officers, see advertising pages 2, 4, and 6.

*For editorial and other comments, see pages 53, 54, 90 and 100.

CALIFORNIA STATE COUNCIL OF DEFENSE†

Complexion of Local Boards.—Each local board is to consist of seven members as follows: a surgeon; an internist; an eye, ear, nose, and throat specialist; an orthopedist; a neuropsychiatrist; a radiologist; and a dentist.

Cities in Which the Headquarters of the District Boards Are to Be Established.—There will be nineteen district or local boards. In the list which follows, there will be one such board for each of the districts named, with the exception of San Francisco, which will have two separate boards, and Los Angeles, which will have six separate boards: Eureka (1); Redding (1); Sacramento (1); Oakland (1); Napa (1); Stockton (1); San Francisco (2); San Jose (1); Fresno (1); Salinas (1); San Diego (1); Los Angeles (district) (6); and Riverside (1).

Counties Included in the Various Districts.—From a map which was received, the districts, with their city headquarters, are as follows:

1. **Eureka District.** (Headquarters of this district will be in the city of Eureka.) Includes the following counties: Humboldt, Del Norte, and Mendocino.
2. **Redding District.** (Headquarters of this district will be in the city of Redding.) Includes the following counties: Siskiyou, Modoc, Trinity, Shasta, Lassen, Tehama, Plumas, Butte, and Glenn.
3. **Sacramento District.** (Headquarters of this district will be in the city of Sacramento.) Includes the following counties: Sierra, Nevada, Placer, Yuba, Sutter, Colusa, Yolo, Sacramento, and Eldorado.
4. **Oakland District.** (Headquarters of this district will be in the city of Oakland.) Includes the following county: Alameda.
5. **Napa District.** (Headquarters of this district will be in the city of Napa.) Includes the following counties: Napa, Solano, Sonoma, and Marin.
6. **Stockton District.** (Headquarters of this district will be in the city of Stockton.) Includes the following counties: San Joaquin, Stanislaus, Tuolumne, Calaveras, Amador, and Alpine.
7. **San Francisco District.** (Headquarters for this district will be in the city of San Francisco.) Includes the following counties: San Francisco City, San Francisco City.
8. **San Jose District.** (Headquarters for this district will be in the city of San Jose.) Includes the following counties: San Mateo, Santa Cruz, and Santa Clara.
9. **Fresno District.** (Headquarters for these districts will be in the city of San Francisco.) Includes the following counties: Merced, Mariposa, Madera, Fresno, Kings, Tulare, Kern, Inyo, and Mono.
10. **Salinas District.** (Headquarters of this district will be in the city of Salinas.) Includes the following counties: Monterey, San Benito, and San Luis Obispo.
11. **San Diego District.** (Headquarters of this district will be in the city of San Diego.) Includes the following counties: San Diego and Imperial.
12. **Riverside District.** (Headquarters of this district will be in the city of Riverside.) Includes the following counties: Riverside, San Bernardino, and Orange.
13. **Los Angeles District.** Headquarters of these districts will be as follows:
In Santa Monica or Beverly Hills, to handle Santa Barbara and Ventura counties; Long Beach or Compton; Burbank, Glendale, or Pasadena; Los Angeles City or Hollywood; Los Angeles City; Los Angeles City.

C. M. A. COUNCIL

Abstract of the Minutes of the Two Hundred and Eighty-Eighth (288th) Meeting of the Council of the California Medical Association*

Held in Room 309, Sir Francis Drake Hotel, Sutter and Powell streets, San Francisco, Saturday, June 29, 1940, at 9 a. m.

† For editorial and other comment, see pages 53, 86 and 90.

* Complete minutes of the Council are available for inspection to any member of the Association upon request.

1. Roll Call.

All members of the Council were present, except as noted: Speaker Lowell S. Goin, O. D. Hamlin (ill), A. E. Anderson (out of state), Dewey R. Powell (out of state).

2. Chairman of Committee on Public Relations.

A mail vote resulted in the election of Dr. Donald Cass of Los Angeles as chairman of the Committee on Public Relations.

3. Resignation of C. O. Tanner.

Resignation of C. O. Tanner of San Diego, Councilor-at-Large, was accepted with regret and thanks for past services.

4. Election of Councilor-at-Large.

Dr. Sam J. McClendon of San Diego was elected councilor-at-large, until the 1941 annual session, to fill the vacancy caused by the resignation of C. O. Tanner.

5. Minutes of Council.

Minutes of the Council meetings (282nd to 287th, inclusive), were approved.

6. Financial Statements.

Financial statements were placed on file.

7. Expenses of Officers.

Concerning the by-law included under Resolution No. 16 adopted by the House of Delegates at Del Monte in 1939, and relating to expense of officers, it was voted that expense items which were not submitted within sixty days after indebtedness was contracted should not be paid.

8. Woman's Auxiliary Roster.

The cost of the separate roster of the Woman's Auxiliary to the California Medical Association was stated to be \$313.01.

9. Special Assessment of June 1, 1939.

Discussion was had concerning procedure in relation to members who were liable for the special assessment of June 1, 1939, who had not paid the same. It was agreed that a letter should be sent to all such members, urging payment, since the expense of the work inaugurated by the Committee on Public Health Education should be proportionately borne by all California Medical Association members, share and share alike.

10. Publications Committee.

Editor's request for transportation expense for a meeting of the Committee on Publications was approved.

11. California Physicians' Service.

Report was made that the mail vote for an additional loan of \$5,000 had been in favor thereof. It was stated that California Physicians' Service had not found it necessary to ask for the loan, up to date of June 29.

12. Indemnity Defense Fund.

A report on the Indemnity Defense Fund inaugurated in the year 1917, and possible procedure in relation to future custodianship of the funds, was made. It was voted to transfer the custodianship from the group of three trustees to the nonprofit corporation, "Trustees Of The California Medical Association." The former trustees were given a vote of appreciation for their past services.

The Legal Counsel was authorized to carry out the instructions of the Council.

13. Recess.

(To permit meetings of the following organizations):

1. Members of "Trustees Of The California Medical Association" (to elect members of the Board of Directors).

2. Board of Directors of "Trustees Of The California Medical Association" (to elect officers of the Board of Directors).

3. Executive Committee (to elect a chairman of the Executive Committee. Charles A. Dukes of Oakland was elected).

14. Reconvening of Council.

15. Reinstatement of Members.

It was voted that all 1939 members who had paid their dues subsequent to April 1, 1940, be reinstated to membership.

16. Retired Membership.

Retired membership was granted to Robert L. Miller and J. E. Vallee of Los Angeles County.

17. Membership Dues.

Legal Counsel was instructed to prepare an amendment providing for payment of amount less than annual dues, to apply to new members admitted after July 1 of any calendar year.

18. Membership.

Reports were submitted regarding several membership problems.

19. Reorganization of County Medical Societies.

Official names in the reorganized counties of the Eighth District shall be: Butte-Glenn County Medical Society; Yuba-Sutter-Colusa County Medical Society and Yolo County Medical Society.

20. Resolution No. 14—Expert Witnesses.

The Department of Public Relations was requested to study Resolution No. 14, adopted by the House of Delegates at Coronado, and make recommendations thereon.

21. Resolution No. 33—Aid to Needy Members.

It was voted that the present Committee on Aid to Needy Members (A. E. Anderson, chairman, Elizabeth Mason Hohl, and Robert Peers) be continued until the next annual session.

22. Resolution No. 30—County Hospital Fees and Accident Cases.

A special committee, consisting of Doctors Cass, O'Neil, and Reinle, was appointed for this work.

23. Date of Del Monte Annual Session 1941.

Date of the next annual session will depend upon the date of the 1941 session of the American Medical Association. It was agreed that Council Chairman Gilman should confer with President Harry H. Wilson and President-Elect Henry S. Rogers as soon as the date of the American Medical Association meeting is set, and they shall have authority to determine the dates for the 1941 California Medical Association session at Del Monte (probably in May, 1941).*

24. Annual Session Equipment.

The chairman of the Committee on Scientific Program, Doctor Kress, was authorized to purchase additional projection apparatus, view boxes, time clocks, etc., for the twelve scientific sections, so that each section may be provided with proper equipment at the next annual session.

25. Annual Session Programs.

For the Committee on Scientific Work, Chairman Kress requested approval of the plan to continue the general meetings on each of the four mornings of the annual session; to give up the Tuesday afternoon entertainment features to permit scientific sections to hold their meetings on each of the four afternoons; to notify collateral and affiliated

organizations that their meetings must be held on meeting days prior to or subsequent to those of the annual session (owing to the limited meeting-room accommodations).

26. Basic Science Act.

Discussion of possible action in regard to the Basic Science Law was had. It was voted to recommend to the Committee on Public Health Education that it strive to expedite the work of securing signatures and to take other necessary steps for the enactment of a Basic Science Law.

27. Report of Delegates to the American Medical Association.

Delegate Best reported on the recent meeting of the American Medical Association held in New York. Attention was called to the fact that the American Medical Association 1943 session will be held in San Francisco; also that, under the reapportionment of the House of Delegates of the American Medical Association, California will be entitled to an additional delegate, this delegate to be elected at the fall meeting of the Council.

The American Medical Association Committee on Medical Preparedness was discussed by Doctor Dukes, who is a member of the American Medical Association Committee of Ten, and the Council voted that P. K. Gilman of San Francisco be appointed chairman of the California Committee on Medical Preparedness, with power to select district and county representatives to work with his committee in cooperation with the American Medical Association program.

28. Wagner-George Bill, Senate 3230.

It was felt that the proposed Wagner-George hospitalization law now before Congress was not altogether satisfactory; and the California Medical Association Council was in agreement with the opinions expressed by the American Medical Association.

29. Compulsory Health Bill.

It was reported that the proposed compulsory health bill could not be placed upon the ballot of the November, 1940, state election, but that it would probably be submitted to the California Legislature in January, 1941.

30. Legislation.

Mr. Read called attention to the amendment to the Relief Bill passed at the special session of the California Legislature whereby it would be possible for California Physicians' Service to cooperate in giving medical care to citizens of certain income groups.

Attention was also called to the fact that the primary elections for legislative candidates would be held on August 27, and the importance of physicians being alert to their civic obligations was stressed.

31. Committee on Public Health Education.

Mr. Marshall made a report on the status of the Essay Contest, and on other activities of the Committee on Public Health Education.

32. Doctors' Day.

It was stated that the American Medical Association had taken no action thereon.

33. Resolution No. 2—Basic Hospitalization Cost.

It was voted that Resolution No. 2 be referred to the California Medical Association standing committee on Hospitals, Dispensaries and Clinics, J. Normal O'Neill, chairman.

34. Resolution No. 23—Proposed Pound Law.

It was voted that Resolution No. 23, in relation to unclaimed dogs in pounds, be referred to the special committee of which Dr. P. K. Gilman is chairman.

* Date has since been set as May 5-8, 1941.

35. Resolution No. 24—Traffic Exemptions to Physicians.

Resolution No. 24, relating to exemption of physicians from traffic laws, was referred to the California Medical Association Legal Counsel for study and report.

36. Speakers' Bureau.

It was announced that Dr. Charles A. Noble of San Francisco had been appointed chairman of the Northern Division of the Speakers' Bureau, to take the place of Dr. John W. Cline, resigned.

37. Publication of Nevada Papers.

The problem of publication of papers read at the annual session of the Nevada State Medical Association was discussed.

38. Members' Endowment Fund.

The donation received from Dr. Brett E. Davis was placed to the credit of the Members' Endowment Fund.

39. Medical Preparedness.

A report was made concerning the need of physicians to aid in the medical care of civilians in the British Isles.

40. California Federated Athletes' Association.

Concerning fees established by the California Federated Athletes' Association, it was voted that this matter be referred for consideration to the Committee on Industrial Medical Practice.

41. Recess for Luncheon.

42. Reconvening.

43. Expert Witnesses.

Legal Counsel Peart discussed certain phases having to do with expert witnesses.

44. Goodall vs. Brite.

Legal Counsel Peart reported concerning this case.

45. Smith vs. Kern County Medical Society.

Legal Counsel Peart reported concerning this case.

46. Council Meeting.

It was voted that the next meeting of the Council be held at Los Angeles on Sunday, October 6, 1940.

47. Executive Session.

Executive session of the Council was called to order by Chairman P. K. Gilman, John W. Cline acting as secretary.

(a) Report was made by President Harry H. Wilson on reorganization plans.

(b) Pension of \$40 per month, subject to revision from time to time, granted to Miss Bradford.

(c) Salary of secretary-treasurer was fixed at \$300 per month.

(d) A special committee was appointed to submit to the Council plans for possible revision of standing and special committees as basis for report to the House of Delegates in 1941. (Chairman Gilman appointed as committee: Doctors George D. Maner, R. Stanley Kneeshaw, and Elbridge J. Best.)

(e) Minutes of the Council to be no longer printed in full in the OFFICIAL JOURNAL, but instead an abstract only with statement, "Complete minutes of the Council are available for inspection to any member of the Association upon request."

Councilors to continue to receive mimeographed copies of minutes and galley proofs of the abstracts.

(f) A special committee, consisting of President Harry H. Wilson, President-Elect Henry S. Rogers, and Chairman P. K. Gilman, was appointed to interview candidates for the new position in headquarters office, and make recommendations to the Executive Committee in regard to the candidates. California Medical Association Executive Committee to have power to appoint and to determine the salary.

Prior to any appointment being made by the Executive Committee, informative data concerning the various candidates to be submitted to the members of the Council.

48. Adjournment.

P. K. GILMAN, *Chairman.*

GEORGE H. KRESS, *Secretary.*

COMMITTEE ON PUBLIC HEALTH EDUCATION†

Direction of the campaign to enact a Basic Science Law in California was assumed by the Committee on Public Health Education during the past month.

At the request of the Council, and pursuant to instructions voted by the House of Delegates at Coronado, the Committee took the first steps toward securing this legislation, which has been desired by the medical profession over a long period of time.

Every member of the California Medical Association will be asked by the Committee to do his or her share toward accomplishing this desirable objective with the utmost efficiency and the least cost.

At the present, activities are with the legal department, preparing the exact form of the measure, which must be enacted as an initiative by vote of the people. The draft of the Special Committee on Basic Science Law, as revised by the Committee on Public Relations last year, will again be carefully studied and further revised. When the proposed act has been properly titled by the Attorney-General and the petitions for circulation among the voters have been prepared, members will be advised of the manner in which they can help in this undertaking.

The Committee on Public Health Education reports progress both on the essay contest now open to students in high schools and junior colleges and on the motion picture, which will depict the advance of medical science in the manner calculated to most appeal to the public.

In anticipation of a busy season starting after the vacation period, the Committee is urging intensified efforts on the part of all speakers' bureaus and additional organization of the same. The Committee also has launched efforts to increase the radio programs now being devoted to medical speeches, which through the coöperation of various county societies have been made available at little or no cost to the medical profession.—R. M.

†The Committee on Public Health Education was established through Substitute Resolution No. 6 at the Del Monte annual session, May 3, 1939.

The Committee on Public Health Education consists of Frank R. Makinson, chairman, Oakland; Philip K. Gilman, San Francisco; Samuel Ayres, Jr., Los Angeles; Thomas A. Card, Riverside; Lowell S. Goin, Los Angeles; Junius B. Harris, Sacramento; Dewey R. Powell, Stockton; Harry H. Wilson (ex officio), Los Angeles. Mr. Ross Marshall is the Public Relations Counsel of the Committee, and may be addressed at 408 South Spring Street, Los Angeles (telephone TUcker 2312), or 244 Kearny Street, San Francisco (telephone YUkon 2212).

C. M. A. DEPARTMENT OF PUBLIC RELATIONS†

Health and Medical Preparedness*

The problem which concerns each of us today is what we can do to contribute to the safety of our country. Traditionally, as doctors and nurses, we have been servants of peace. When war did come, it was our job to patch up the wounds, ease the suffering of the wounded, and repair as best we could the damage done by shot and shell.

We are not at war. If we have time enough—if we are swift and wise enough in the time that we have—war in this hemisphere may be prevented. But the old rules of war, and the preparation for it, have been demolished. The whole task of national defense is different from what it was twenty-five years ago. . . .

Today I would discuss with you the aggressive action which you and I, by virtue of our calling—because we are the servants of peace—must take to build up national strength. The needs to be met are enormous in scope, yet simple in analysis. National strength can be built up only by the adequate application of all the sciences to the provision of armament, munitions and supplies, food, and manpower. Our job is manpower.

Our defense plans, for the immediate emergency, are still young. There is much in the way of organization and coordination yet to come. But as a first step in meeting the vital needs of manpower preparedness, I propose that a coordinator of medical and health preparedness for national defense be appointed under the National Defense Council. There is much for him to do. He would work with and through the Surgeons-General of the United States Army, the United States Navy, and the United States Public Health Service, other Federal agencies, and the national voluntary organizations concerned with the prevention, diagnosis, and treatment of disease.

A first task is the need for listing and classifying professional and technical personnel in the country; for planning and aiding, if and when necessary, the recruitment and mobilization of medical and health personnel.

Another urgent task involves the protection and promotion of the health of industrial workers. . . .

Certain diseases have particular military importance. The venereal diseases are at the top of the list. They caused more disability in the last war than anything except wounds and influenza. Fortunately we have been forehanded in building some machinery in every state to deal with this problem. We need to intensify these efforts, especially in those areas of military and industrial mobilization.

The importance of tuberculosis is accentuated by the current situation. . . .

Of the many military medical and health problems in the tropical Americas, the most important is malaria. . . .

Another strategic medical material, for which we are dependent upon foreign sources, is opium. For four years I have prescribed the total annual amounts which could be imported into the United States. Before and after Munich, I aided our commercial importers to build up a war chest

of opium and morphin. In the vaults at Washington, formerly used to store gold, we have stored enough morphin for at least three years. Our regular source has been from the eastern Mediterranean, now closed. Before this supply is exhausted, we can if necessary grow in certain areas of the United States the pain-relieving poppy plant. But it must be planned now.

Other diseases require our attention. Next to the venereal diseases, mumps is the most disabling of the acute infections among recruits. Meningitis was a great hazard during the last war. Influenza still is a major threat. . . .

When armies are mobilized certain proved immunizations are used. Typhoid fever, yes. Smallpox, yes—since Jenner's discovery of more than one hundred years ago. A recently developed toxoid against tetanus is of proved value and will be used routinely. Effective immunization against gas gangrene would be another great aid. By a few months of coordinated effort on the part of commercial, university, and governmental groups, a practical protection against this major war hazard should be perfected. Here is another job for the coordinator.

Our first concern may be in tropical America. I have discussed malaria. What about yellow fever? Prevalent throughout large areas of South America, a constant threat to the southern half of the United States, we do not have in this country enough of the effective vaccine against it to immunize one regiment! In spite of the requests from year to year, I have not been able to secure funds with which to produce a reserve supply.

These examples, among many I could cite, illustrate my major thesis. There are many diseases, of great military importance, which we could control if we were given the will, the authority, and the money to do it.

If or when war comes, every 1,000,000 men mobilized need 7,500 doctors drawn from civil practice. Dentists, nurses, sanitary engineers are need, too. In the mobilization of four million during the last war, more than a fourth of the effective medical men of the country were called to the colors. Whole counties were depleted of doctors. Many medical schools were almost put out of business, because the best men left for military duty. We should not repeat these mistakes. Today we should investigate who should go, who should stay to practice, to teach, to operate an essential civilian service. We have no machinery now to do this. A coordinator of medical and health preparedness should create the machinery, working with the public health agencies, the schools, and the medical profession itself.

We have a shortage of laboratory technicians. Intensive courses would provide more. Universal training would deplete the ranks of medical students; yet we need doctors each year to replace obsolescence. . . .

Further, let us consider the whole problem of national fitness. The President has recommended that all youth give one year to public service—be trained during this time in some skill. How fit are they from a physical and mental viewpoint? Enrollment should include a careful examination. All correctable defects should receive prompt attention. As yet, there is no organization, no planning of an organization to do it. This is a task projected.

Let us consider two tasks immediately before us. The National Youth Administration employs 300,000 young people. Here is a measurable group, beneficiaries of the Government. After five years no plan has been worked out to appraise their physical status. Should not we take this group of underprivileged youth and apply our proved medical science to relieve their correctable defects?

Employed by the Work Projects Administration are nearly two million people. The nation wants to use their services; they themselves want to serve in the ways they

†The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. Donald Cass of Los Angeles is the chairman, and Dr. George H. Kress is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. George H. Kress, Room 2004, Four Fifty Sutter Street, San Francisco.

*By Thomas Parran, Surgeon-General, United States Public Health Service.

Read before the New York State Conference of Health Officers and Public Health Nurses, Saratoga Springs, June 25, 1940.

For other comment on medical preparedness, see pages 53, 86, 87 and 100.

can best contribute to national safety. What is their physical status? No one knows. I propose that each of them be examined; that we use methods comparable to those of the Draft Boards of twenty-two years ago, and classify the Work Projects Administration employees physically into three or four classes. . . .

Not through any pity for their working people, but because their scientists proved to them that it was an essential to national power, the Germans began several years ago to provide for the working masses a diet better than ours have now. We have made a beginning in this direction through the food-stamp plan. What we need is an intensive national drive, with rigid scientific controls, to use the food we have to improve the fitness of our manpower.

Though I would not presume to draw up a blueprint for the whole effort of health preparedness, each of the problems mentioned needs prompt attention. With authority from the National Defense Council, several committees of experts, both official and professional, should undertake special responsibilities. What seems now a huge, illimitable job is, in reality, a composite of measurable tasks. . . .

In the past there has been division of opinion and occasional dissension among our professions concerning methods proposed to bring better health and a higher standard of medical care to our people. In the face of danger it is the democratic way—even the herd instinct—to unite for the agreed objectives of safety. We cannot now afford controversies. The preparedness of our manpower for national safety is not controversial. Given a hand in the planning, all of us together, official and professional, can work out methods in which we all believe. . . .

In the dictatorships, the state is served by sacrifice of the individual and enslavement of the men of science. If our democracy is to stand, we—as doctors, as health officers, as health workers, as citizens—of our own free will, because we know it is necessary, must put medical science to work now, fully, to make our men as good as our machines.

* * *

Exhibit at Golden Gate International Exposition: "The Human Eye"

Most physicians are well aware of the political, economic, and social pressure that is being directed against the best interests of medicine and the public health at the present time. This pressure has led certain groups and individuals

* Article contributed by George N. Hosford, M. D. For editorial comment, see page 55.

within the profession to pay, perhaps too late, some attention to a subject, the importance of which was long ago recognized by progressive commercial organizations, viz., the subject of public relations.

Businessmen know that they can obtain from the public a favorable hearing of their viewpoints once they have gained public attention and interest through some entertainment medium. The medical profession, probably wisely, is beginning to utilize the same approach through radio, popular magazines, and other media.

In 1939 an attempt was made to include an ophthalmological exhibit in both the San Francisco and New York Fairs, but both projects were given up. This year, on April 24, Mr. G. L. Bowe, Director of the Exhibits Division of the Golden Gate International Exposition, appeared at a meeting of the Eye, Ear, Nose and Throat Section of the San Francisco County Medical Society to ask if it would be possible to design and assemble an exhibit on ophthalmology for the Science Building on Treasure Island. The response of the members present was so encouraging that Dr. Matthew N. Hosmer, chairman of the section, appointed a committee to consider the proposal, and, if it were found practicable, to arrange the exhibit. The committee consisted of Doctors George N. Hosford (chairman), Joseph Crawford, David Harrington, Robert Irvine, and Dohrmann Pischel.

Within two weeks, sufficient funds had been pledged by individual ophthalmologists and societies and by the California Association of Dispensing Opticians and the manufacturers of ophthalmic supplies so that an exhibit was assured.

The exhibit was completed in time for the record-breaking Exposition attendance of July 4. On this day nearly 12,000 persons tested their vision and inspected the educational features of the exhibit.

Treasure Island's visitors are lining up to work the machine that shows them "what the physician sees inside your eye with an ophthalmoscope." They await their turns to see if they are color blind. They show great interest in learning their visual acuity ratings. They are finding out that the eye is a medical problem and that there is a difference in the diagnostic abilities of ophthalmologists and a group of laymen who, under the name of optometrists, have invaded the field that belongs to the ophthalmologist. They are learning that proper treatment brings with it worth-while results and should not be feared or avoided. Best of all, some of these spectators are going



A view of the exhibit, The Human Eye, at the Golden Gate International Exposition.

away with the feeling that a group of physicians is trying to do something to explain what scientific medicine is.

While the exhibit was planned for laymen, much of the material is very good; the explanations are, as far as possible, pictorial, and we hope the exhibit will be interesting also to doctors who do not specialize in diseases of the eye. The Committee would appreciate having the exhibit called to the attention of patients when there is an opportunity.

COMMITTEE ON POSTGRADUATE ACTIVITIES†

Eighth Councilor District Postgraduate Conference: At Tahoe Tavern, August 24-25, 1940

On Saturday and Sunday, August 24-25, at Tahoe Tavern, a two-day Postgraduate Conference will be held. The Eighth Councilor District is composed of the following county societies: Alpine, Amador, Butte, Colusa, Eldorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter, Tehama, Yolo and Yuba.

A preliminary notice has been sent to the physicians of the District by the local Committee on Arrangements: Councilor Frank A. MacDonald, ex-President Robert A. Peers, and Doctor George Briggs.

The Conference will open on Saturday, August 24, with informal luncheon at 12 o'clock noon.

During the afternoon, several papers will be presented. In the evening, at seven o'clock, there will be a dinner, with Doctor Peers presiding; this to be followed by dancing. Keep in mind that the ladies are invited and expected. An Auxiliary meeting will also be held. On Sunday morning, several papers will be given, to be followed by luncheon.

Guest speakers will give the talks and discussions on scientific topics, and officers of the State Association may make brief addresses on organization problems.

The C. M. A. Committee on Postgraduate Activities joins with the local committee in expressing the hope that physicians of the District will find it possible to be present at the Clinical Conference on August 24 and 25.

* * *

Stanford University School of Medicine: Postgraduate Medical Courses for Practicing Physicians

The Stanford University School of Medicine, in cooperation with the San Francisco Department of Public Health and the San Francisco Hospital, in the period September 9 to 13, 1940, inclusive, offers a series of courses for practicing physicians. Each physician may take one morning and one afternoon course, or a full-day course, and all physicians should attend the evening general meetings.

There will be a registration fee of \$25. An additional fee of \$10 will be made to cover the cost of materials used in Course 3, Surgical Anatomy and Operative Technique, and in Course 8, Otorhinolaryngology. Registration closes on August 31.

All fees are payable to Stanford University School of Medicine. Checks and applications for registration in these courses should be mailed to the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco, not later than August 31.

†Requests concerning clinical conferences, guest speakers, and other information, should be sent to the California Medical Association headquarters office, 450 Sutter, San Francisco, in care of the Association Secretary, who is secretary ex officio of the Committee on Postgraduate Activities.

Titles of courses follow:

I. MORNING COURSES

*Monday, Tuesday, Wednesday, Thursday, and Friday,
8:30 to 12:00*

Course 1—Pediatrics.

Course 2—Gastro-enterology.

Course 3—Surgical Anatomy and Operative Technique (limited to twenty-four physicians).

II. AFTERNOON COURSES

*Monday, Tuesday, Wednesday, Thursday, and Friday
1:30 to 5:00*

Course 4—Management of Hypertension and Nephritis.

Course 5—X-ray Diagnosis and Therapy (for doctors experienced in and practicing radiology, but not limited to those who are specializing exclusively in radiology—limited to twenty physicians).

Course 6—Proctology.

III. FULL DAY COURSES

*Monday, Tuesday, Wednesday, Thursday, and Friday
Mornings, 9 to 12; Afternoons, 2 to 5*

Course 7—Surgical Emergencies, Traumatic Injuries and Fractures (at San Francisco Hospital).

Course 8—Otorhinolaryngology (for specialists only; general practitioners not eligible for this course).

Course 9—Anesthesiology (limited to six physicians. Only those whose practice includes anesthesiology will be eligible to this course).

* * *

Postgraduate Refresher Courses in Pediatrics and Obstetrics

Sponsored by the California State Department of Public Health (Social Security Act), approved by the Committee on Postgraduate Activities of the California Medical Association, and under the auspices of the University of California Medical School, a series of postgraduate refresher courses have been planned for the year 1940 and 1941. A series of three courses have been, or will be given during the summer months of 1940 as follows:

July 8 to 20—*Pediatrics.*

July 22 to 27—*Obstetrics.*

July 29 to August 10—*Pediatrics.*

Additional Courses.—Two courses are planned for the Christmas recess, beginning December 16, 1940. These courses are especially designed for health officers, but will be open to others who may be interested in attending.

A series similar to those recently given is planned for May and June of 1941.

An opportunity will be given to those physicians in the State who may be interested to apply for admission to the two forthcoming series of courses. Attendance at the courses is limited to fifteen physicians for each conference. The privilege of enrolling for both the pediatric and obstetric sessions will be granted as far as the limited number of registrants allows. Physicians who are interested in attending any of these conferences should, for the present, correspond with the State Department of Public Health, 306 State Building, 300 McAllister Street, San Francisco. At a later date enrollments may be transferred to the University of California Pediatrics Department.

An informative statement follows:

† † †

(COPY)

STATE OF CALIFORNIA: DEPARTMENT OF PUBLIC
HEALTH, BUREAU OF CHILD HYGIENE

The State Department of Public Health announces a repetition of the postgraduate course in pediatrics for phy-

sicians coöperating with the Bureau of Child Hygiene.

Specific Information:

Opening Date—July 8, 1940.

Length of Course—Two weeks.

Place—School of Medicine, University of California, San Francisco.

In Charge—Dr. Amos Christie, Associate Professor in Pediatrics, Acting Head, Department of Pediatrics.

The Faculty—Members of the staff of the Department of Pediatrics.

Registration—Limited to ten physicians. The State Department of Public Health will pay the registration fee for the course and round-trip transportation of each registrant.

This practical course in preventive and clinical pediatrics is part of a series of postgraduate courses to be given at the School of Medicine, University of California, under the sponsorship of six western State Departments of Public Health.

Immediately following the course in pediatrics, a postgraduate course in obstetrics will be given. Following the latter, the course in pediatrics will be repeated for those who have been unable to attend the first two courses in pediatrics sponsored by the State Department of Public Health.

Please use blank below to register with the State Department of Public Health, Bureau of Child Hygiene, 300 McAllister Street, San Francisco.

✱ ✱ ✱

I hereby apply to be enrolled for the postgraduate course in Pediatrics at the School of Medicine, University of California, beginning July 8, 1940.

Signed

Address

Town

Date

306 State Building, San Francisco.

CALIFORNIA PHYSICIANS' SERVICE†

As of July 1, 1,300 additional California State Employees' Association members were added to California Physicians' Service ever-increasing number of beneficiary members, bringing the present total to approximately 16,000.

There is now a representative of California Physicians' Service and Associated Hospital Service located in Fresno, Mr. H. B. Rector. He will cover Fresno, Kings, Tulare, and Kern counties, and it is the firm conviction of all those connected with both California Physicians' Service and the hospital association that there is a great deal of interest in the San Joaquin Valley and that new members will be rapidly acquired in that area.

The study referred to in last month's article is still in progress, and it is hoped that within sixty days it will be possible to present to the profession some interesting statistics relating to the nature and extent of care being rendered to persons belonging to California Physicians' Service; statistics which will, without doubt, contribute

†Address: California Physicians' Service, 333 Pine Street, San Francisco. Telephone EXbrook 3211. Alson Kilgore, M. D., Secretary.

Copy for the California Physicians' Service department in the OFFICIAL JOURNAL is submitted by that organization.

For roster of nonprofit hospitalization associates in California, see in front advertising section on page 3, bottom left-hand column.

materially to the intelligent administration of the Service in such a way as to increase the unit value.

✱ ✱ ✱

Looking toward the simplification of paper work for doctors and their secretaries, a new form has been devised which eliminates the use of the small pink referral and initial report heretofore used for every patient who is a California Physicians' Service member. In lieu of this form, provision is made for a report on those cases involving more than three visits, hospitalization, or for cases requiring complete medical study or x-rays or laboratory examinations (beyond urinalysis or, for premarital examinations, a Wassermann). The new form has been in use in San Francisco since late in June, on an experimental basis, and since early in July in Alameda County. Indications thus far are that the form has been well received by doctors, and from the standpoint of the central office it is a great improvement. It is anticipated that within sixty days it will be possible to spread the use of the form to all other counties of the state.

COUNTY SOCIETIES†

CHANGES IN MEMBERSHIP

New Members (20)

Fresno County (1)

Darrell Overpeck, *Fresno*

Merced County (1)

Harry R. Maytum, *Merced*

San Bernardino County (5)

Truman T. Ackerson, *Upland*

Leland C. Jacobson, *San Bernardino*

Frank C. Melone, *Redlands*

Henry Wiedow, *Twenty-nine Palms*

Rudolph P. Wipperman, *Patton*

San Diego County (1)

Ralph M. King, *San Diego*

San Francisco County (4)

Joseph H. Davis, *San Francisco*

Jay Jacobs, *San Francisco*

Ambrose P. Merrill, *San Francisco*

Alexander Petrilli, *San Francisco*

Santa Clara County (1)

Harvey S. Pinto, *Agnew*

Sonoma County (4)

Julius Lewis, *Santa Rosa*

Robert Lewis, *Santa Rosa*

Vincent Meyers, *Santa Rosa*

John Siemens, *Santa Rosa*

Ventura County (2)

F. William Cutts, *Camarillo*

Seymour Dudley, *Santa Paula*

Yolo County (1)

Webb D. Garcelon, *Esposito*

Transfers (1)

Homer R. Evans, from Kern County to San Bernardino County.

† For roster of officers of component county medical societies, see page 4 in front advertising section.

In Memoriam

Bond, Elmer C. Died at Hanford, July 8, 1940, age 66. Graduate of the California Eclectic Medical College, Los Angeles, 1899, and licensed in California the same year. Doctor Bond was a member of the Kings County Medical Society, the California Medical Association, and the American Medical Association.

✱

Bryant, De Witt Clinton. Died at Los Angeles, July 1, 1940, age 91. Graduate of the University of Wooster Medical Department, Cleveland, 1875. Licensed in California in 1917. Doctor Bryant was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✱

Condit, Joseph Dayton. Died at Pasadena, July 5, 1940, age 63. Graduate of Columbia University College of Physicians and Surgeons, New York, 1901. Licensed in California in 1904. Doctor Condit was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✱

Fitzgerald, William Wesley. Died at Stockton, July 7, 1940, age 72. Graduate of Jefferson Medical College of Philadelphia, 1895, and licensed in California the same year. Doctor Fitzgerald was a member of the San Joaquin County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✱

Frost, Edmund. Died at Stockton, June 26, 1940, age 59. Graduate of the College of Physicians and Surgeons, San Francisco, 1918, and licensed in California the same year. Doctor Frost was a member of the San Joaquin County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✱

Gottbrath, Norbert Joseph. Died at San Francisco, June 20, 1940, age 61. Graduate of Georgetown University School of Medicine, Washington, D. C., 1912. Licensed in California in 1916. Doctor Gottbrath was a member of the Santa Clara County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✱

Speik, Frederick A. Died at South Pasadena, June 30, 1940, age 58. Graduate of Rush Medical College, University of Chicago, 1907. Licensed in California in 1912. Doctor Speik was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✱

Thompson, Harry Douglas. Died at Los Angeles, July 3, 1940, age 48. Graduate of College of Physicians and Surgeons, Los Angeles, 1918, and licensed in California the same year. Doctor Thompson was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION†

MRS. A. E. ANDERSON.....President
MRS. WILLIAM C. BOECK.....Chairman on Publicity
MRS. KARL O. VON HAGEN.....Asst. Chairman on Publicity

Inaugural Address of Mrs. V. E. Holcombe, President of the Woman's Auxiliary to the American Medical Association (1940-1941)

It is with a feeling of deep gratitude and indebtedness to my predecessors in office that I contemplate serving the Auxiliary in the capacity of president.

In the five years of service as a member of the National Board my opportunity has been unusual to appraise the value of its leadership. I am conscious at all times of the high attainment and unselfish service rendered by my predecessors.

The natural instincts of physicians' wives are not unlike those of other women of the present age. The essential function of woman is that of a helpmeet. When we, as doctors' wives, have that function expressed in moulding the sentiment of our contacts and communities in line with the program and platform of organized medicine, we experience the fruition of our Auxiliary ideals.

This is the opportune time for our supreme effort in reiterating and establishing on a firm foundation, which will withstand the onslaughts of adverse activity, the tenets and postulates of a great and humanitarian profession which have been evolved and perfected by the free and unhampered efforts of great souls, operating in the atmosphere of freedom since the inception of our national life.

In former years the moulding of public opinion was a slow and tedious process. Today, with our multiple means of communication, rapid and radical changes in thought and expression are the order of the day. Consequently, in order to intercept and circumvent false ideas and false conceptions regarding the practice of medicine, it is expedient for the Auxiliary, if it is to serve in its fullest capacity, to be more than ever on the alert to recognize any propaganda or subversive influence which is inimical to the purposes and traditions of the medical profession. We must be cognizant at all times of the changing impacts upon the consciousness of the present-day individual, which determines human opinion and reaction.

This is the age of unified effort. It is only through concerted action that the objectives for which the individual strives can be attained.

Thus, the Auxiliary may best utilize group activities through discreet methods of propagating the knowledge necessary to mould public opinion and make it conversant with the objectives of organized medicine. The attainment of these objectives is to be consummated indirectly by the process of permeation through the laity and through the medium of an opportune word, or impetus to a thought in the right direction, or the judicious redirection of sentiment which may react unfavorably upon the medical profession.

To come from generalities to specific and practical thoughts, let us reiterate the aims of the National Auxiliary. They are:

1. To interpret the aims of the medical profession to

†As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Karl O. Von Hagen, Assistant Chairman on Publicity, 5867 Whitworth Drive, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Von Hagen and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the Editor to allocate two pages in every issue to Woman's Auxiliary notes.

other organizations interested in the promotion of health education.

2. To assist in the entertainment at the sessions of the American Medical Association.

3. To encourage friendliness among the families of the medical profession.

4. To do work approved by the Advisory Council of the American Medical Association.

In order to carry out these objectives we must have a concrete workable program. We do not propose to institute a spectacular program, but we do propose to develop or work out a program according to the needs that arise, the tenor of which is now, as always, self-instruction in matters pertaining to individual and public health, so that we may become instruments in the transmission of this knowledge to the laity. In each community the Auxiliary, through its Advisory Council, should cooperate with its local medical society on the problems of local interest which might include any of the health problems in a long list.

The Auxiliary will continue its interest in *Hygeia*, and in supporting the radio broadcast by the Health Education Bureau of the American Medical Association, Public Relations, Health Education program and legislation.

I especially urge the National and State officers, before formulating plans for the coming year, to familiarize themselves with the platform of the American Medical Association and become conversant with the procedure during the present session of the House of Delegates, the addresses of the duly elected officers of the American Medical Association, and the reports made by the trustees and the scientific councils to the House of Delegates.

Nineteen hundred forty finds the Woman's Auxiliary to the American Medical Association entering upon the nineteenth year of its career. The history of an organization, if it is to be a record of forward movements and high achievements, depends on three factors: the ideals embodied in the purpose of the organization; the efficient, consecrated efforts of its leaders and members in the promotion of its plans and loyalty to its policies; and the ability to meet the exigencies of the times in its benefactions.

The years of serious endeavors, the straightforward facing of ever-changing conditions, the understanding of the importance of health and the difficulties in the professional field, and now the war, have brought to the members of this organization a conviction that the work of the organization, if it is to go forward, must be done in a spirit of "service to humanity." All selfish ambitions must be set aside; idealism become realism; and each phase of the Auxiliary's activities more closely correlated.

The growth in membership of any organization over a period of years would be of no particular value to the cultural, artistic, and educational development of a nation were it a matter of figures only. But the practical idealism of the high purposes of this organization, the constant effort of its increasing membership and the ability to meet the ever-changing forces with which profession and humanity has had to combat, has placed the Auxiliary in the front ranks of those organizations most helpful in creating a new and most vital recognition and understanding of authentic health information.

Body's Temperature Maintained by Delicate Inner Adjustments.—The human body is able to maintain a delicately adjusted internal temperature in spite of the fact that it operates under a much greater range of external temperature and much more severe conditions than any

man-made machine endures, Dr. George A. Skinner, Berkeley, California, points out in *Hygeia, The Health Magazine*.

The air taken into the respiratory tract, he says, may vary from far below zero to much above 100 F. Such air must also be maintained at a relatively constant content of moisture or the mechanism fails to function properly. It is, therefore, a highly complicated problem to meet the necessary conditions, yet most of them are met right at the air intake of our respiratory system, for a marvelous "air conditioner" is located in the cavities of the head, connected with the nose.

"The air is taken from wherever we happen to be," the author explains, "it is warmed and filtered; then moisture is added, and it passes on through the voice box (larynx) into the largest tube of the system, which we call the wind-pipe or trachea. The main air tube soon divides into two tubes of about equal size, and these go to opposite sides of the body. Then begins a series of divisions and subdivisions until there is a large number of branches, much like the branching of a tree. The ends of the finest tubes expand so that each terminal looks like a tiny bunch of grapes. It is in these small expansions that the most important part of respiration takes place, for here the used gases are extracted from the blood, and fresh oxygen is substituted to keep the fires burning that maintain the vital processes.

"The little hairs that we can see in the nose do much to remove dust and keep other foreign matter from entering the respiratory system, unless we become careless and breathe through the mouth. The air filters on all modern automobiles perform a similar function by removing much of the road dust that tends to increase wear on the cylinders. Lining the nasal cavities is a pink membrane which secretes mucus, which captures much of the dust suspended in the air. But in addition to that the mucus is pierced with millions of tiny hairlike structures called cilia. They are constantly sweeping out foreign materials, and as long as they are active, germs have little chance of making a successful landing. If, however, the body temperature begins to go down, as after prolonged exposure to cold, the motion of the cilia begins to slow down, and if the body temperature falls as much as two degrees, the motion may stop entirely. Hence, there is then an opportunity for the millions of germs that always inhabit our upper air passages to find a camping place and start working.

"Heat may escape from the body in a number of ways. We lose heat with each exhalation and with the body excretions. But the organ of greatest heat loss is the skin. When the body heat gets too great, the blood rushes out to the surface of the body, and the glands excrete water, which carries off a large amount of heat. The amount of water thrown off is in direct proportion to the amount of heat to be eliminated.

"When enough heat has been eliminated so that the body temperature will not go above its normal (98.6 F.) the perspiration stops, the blood vessels again contract to normal size, and the body routine is resumed. If on the other hand heat losses are too rapid, instead of the blood vessels dilating and the skin becoming full of blood, the vessels contract, the skin tightens up and the blood is driven into the deeper parts of the body where it cannot lose heat so rapidly. If cold does not come too rapidly, the body will tolerate a prolonged and severe chilling without damage."

Single Syphilis Test Not Conclusive.—In discussing the discrepancies of syphilis tests, Dr. G. Marshall Crawford and Dr. Leon F. Ray, Portland Oregon, in *The Journal of the American Medical Association*, warn that neither a single positive nor a single negative test should be accepted as final. If a history suggestive of syphilis exists, tests should be done repeatedly until they are consistently positive or negative.

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-Five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings.†

American Medical Association, Cleveland, Ohio. (Exact date not decided.)

California Medical Association, Hotel Del Monte, Del Monte, California, May 5-8, 1941.

Western Section of the American Urological Association, Empress Hotel, Victoria, B. C., July 29-31, 1940. Dudley P. Fagerstrom, M.D., Secretary, 710 Medico-Dental Building, San Jose, California.

Medical Broadcasts.*

American Medical Association Broadcasts: "Medicine in the News."—The American Medical Association and the National Broadcasting Company have announced "Medicine in the News," on timely topics from medical news of the week. Thursdays, 4:30 p. m., Eastern standard time (1:30 p. m., Pacific standard time), Blue Network, coast to coast. Thirty weeks. Opened on November 2, 1939. Facts, drama, entertainment, music.

Pacific States:

| | |
|-------------------|--------------------|
| KECA Los Angeles | KTMS Santa Barbara |
| KFSD San Diego | KEX Portland |
| KGO San Francisco | KJR Seattle |
| KGA Spokane | |

Los Angeles County Medical Association.

The radio broadcast program for the Los Angeles County Medical Association for the month of August is as follows:

Saturday, August 3—KFI, 9:45 a. m., The Road of Health; KFAC, 10:15 a. m., Your Doctor and You.

Wednesday, August 7—KECA, 11:15 a. m., The Road of Health.

Saturday, August 10—KFI, 9:45 a. m., The Road of Health; KFAC, 10:15 a. m., Your Doctor and You.

Wednesday, August 14—KECA, 11:15 a. m., The Road of Health.

Saturday, August 17—KFI, 9:45 a. m., The Road of Health; KFAC, 10:15 a. m., Your Doctor and You.

Wednesday, August 21—KECA, 11:15 a. m., The Road of Health.

Saturday, August 24—KFI, 9:45 a. m., The Road of Health; KFAC, 10:15 a. m., Your Doctor and You.

Wednesday, August 28—KECA, 11:15 a. m., The Road of Health.

Saturday, August 31—KFI, 9:45 a. m., The Road of Health; KFAC, 10:15 a. m., Your Doctor and You.

†In the front advertising section of *The Journal of the American Medical Association*, a different roster of national officers and organizations appears each week, each list being printed in revised form about every fourth week.

*County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Incidence of Syphilis.—Among the 20,000,000 men of draft age in the United States, 324,000 today are infected with syphilis, Assistant Surgeon-General R. A. Vonderlehr of the United States Public Health Service recently told the Junior Chamber of Commerce in Washington.

Syphilis is responsible for more nonproductive man days in persons twenty to thirty-nine years of age than the time lost through casualties during the entire period of the last World War. . . .

Dean Schmidt to Aid in Revision of Pharmacopoeia.

Dean Carl L. A. Schmidt of the University of California College of Pharmacy will serve as a member of the United States Pharmacopoeia Revision Committee. Dean Schmidt was elected to membership on the committee at the United States Pharmacopoeia Convention held recently in Washington, D. C.

The committee is composed of representatives of the medical and pharmaceutical professions and is charged with the duty of revising the forthcoming twelfth edition of the United States Pharmacopoeia.

Explosive Properties of Cyclopropane.—Results of a study of the explosive properties of cyclopropane, used in anesthetic mixtures, are given in a report just issued by the Bureau of Mines, United States Department of the Interior. The report also discusses the prevention of explosions by dilution of the explosive mixtures with inert gases.

This is the first of a series of reports giving the results of experiments relative to the explosibility of anesthetic mixtures made by the Bureau of Mines in cooperation with a committee working under the direction of the Department of Industrial Hygiene, School of Medicine, University of Pittsburgh, and composed of representatives of the University of Pittsburgh, the American Society of Heating and Ventilating Engineers, and various hospitals and industries in the Pittsburgh district.

Due to a number of distressing accidents in recent years caused by the ignition of explosive mixtures of combustible gases and vapors used in anesthesia, a thorough investigation is clearly of vital importance. . . .

The Bureau of Mines has found that one of the most satisfactory means of eliminating explosion hazards from combustible gaseous mixtures lies in the control of the oxygen content of the mixture. When the oxygen content of explosive mixtures is reduced by the addition of inert gases, the range of explosibility is narrowed and with continued dilution a concentration of oxygen is reached at which the mixtures are no longer explosive or inflammable. Thus by properly controlling the oxygen concentration, gaseous combustible mixtures may be handled and used safely. . . .

Copies of this paper, Report of Investigations 3511, "Explosive Properties of Cyclopropane: Prevention of Explosions by Dilution with Inert Gases," by G. W. Jones, R. E. Kennedy, and G. J. Thomas, may be obtained from the Bureau of Mines, Washington, D. C.

American Board of Ophthalmology.—There will be only one written examination during 1941. This will be held in various cities throughout the country on March 8.

A special oral and clinical examination will be held on the Pacific Coast during 1941, provided there will be enough candidates to warrant it. Applications for this examination should be filed before September 1, 1940, so that the Board may complete necessary arrangements.

Physicians who plan to take the examination during 1941 should write at once to the Board office for formal application blanks, indicating preference of examination place. Address: American Board of Ophthalmology, 6830 Waterman Avenue, St. Louis, Missouri.

Annual Meeting of Eye and Ear Specialists.—The American Academy of Ophthalmology and Otolaryngology will hold its forty-fifth annual convention in Cleveland, October 6 to 11, with headquarters at the Hotel Cleveland.

The Academy, an organization of more than 2,500 specialists in diseases of the eye, ear, nose and throat, carries on an active program of education for its members. In addition to scientific papers, an elaborate series of courses is presented at each convention to bring the members up to date in their chosen fields. More than one hundred of these teaching lectures will be offered this year.

In the past year arrangements have been made to extend the teaching activities to young physicians just entering on specialization. Home study courses are being prepared for any of these young men who wish to take them, and their work will be supervised by members of the academy interested in improving the caliber of specialists in practice.

For information, write to the American Academy of Ophthalmology and Otolaryngology, 1500 Medical Arts Building, Omaha, Nebraska.

The Cleveland meeting will be noteworthy in several respects.

Stutterers Cured by Los Angeles Psychologist.—A complete cure for all stutterers and speech blockers who took a full course of treatment in an experiment on the Los Angeles campus of the University of California was reported by Dr. Harry M. Case of the psychology department.

Doctor Case said that, of thirty cases in the experiment, ten had completed the course of treatment and been discharged as completely cured in an average of eight months. Doctor Case has just taken his Doctor of Philosophy degree.

"An important factor in the recovery of those finally discharged as cured," said Doctor Case, "is possibly found in their exceptionally regular attendance and in their desire to find a solution to their problem. The attendance of patients reporting improvement but no cures was poor."

In treating the stutterers used in the experiment, negative practice was used in conjunction with, or after, the removal of social and vocational maladjustments which caused the speech defect.

Negative practice is the training of the patient to perform voluntarily an involuntary habit. Thus when the stutterer learns to stutter voluntarily he is able to imitate himself perfectly or to avoid the habit at will.

The psychologist said, however, that unless adjustment of socially maladjusted patients is undertaken, in addition to negative practice, the stutterer will not be completely cured.

Speech blockers, patients showing inability to speak under formal social conditions, became worse when treated in the same way as stutterers. A successful treatment was discovered by having the patient engage in a series of conversations, gradually increasing the size of the group until he reached the point where he originally encountered the speech blocking tendency.

Radio Manganese Reveals New Metabolic Facts.—Manganese, the substance which prevents steel from becoming brittle and has other important industrial uses, has developed a new interest in human and animal metabolism as a result of experiments carried on by the Division of Biochemistry of the University of California. Using radioactive or "tagged" manganese from the University's cyclotron or atom smasher, the University experimenters, Dr. David M. Greenberg, associate professor, and W. Wesley Campbell, research fellow in biochemistry, found that the rat excretes all but a trace of administered manganese. Manganese is not well excreted by the kidneys and such quantities as are absorbed by the animal body are taken up by the liver, bones, and muscles. The amount in bone may be of a significance in bone structure since, in the chicken, lack of manganese predisposes to the bone disease known as perosis or, more commonly, slipped tendon. Other tissues may take up varying amounts of the manganese due to storage or to the process of excretion.

It had been previously demonstrated that manganese is essential for the health and well-being of the animal organism. However, little was known about its specific biological functions. It had been found that it aids lactation in the rat and is markedly effective in preventing perosis. The results achieved by the University experimenters demonstrate that radioactive manganese may be usefully employed in the elucidation of many problems connected with its metabolism.

Ivy Poisoning.—Protection against ivy poisoning is possible by use of an alkaline vanishing cream containing sodium perborate or potassium periodate, according to a report by the United States Public Health Service.

This protective ointment for the prevention of ivy poisoning consists of 10 per cent sodium perborate in a vanishing cream which is to be rubbed into the skin of the arms and face of workers before exposure to poison ivy. The vanishing cream fills the pores and forms a protective covering and prevents much of the poison from penetrating the skin.

As the perspiration comes in contact with the vanishing cream in the pores of the skin, a soap is formed and the alkalinity of the soap tends to neutralize the poison ivy, in addition to washing it off and out of the skin. This ointment was developed in the Office of Dermatoses Investigations at the National Institute of Health, Bethesda, Maryland, and reported in the current issue of *Public Health Reports*, weekly publication of the United States Public Health Service (*Public Health Reports*, Vol. 55, No. 27).

This vanishing cream should be freshly prepared at least once in two weeks to avoid deterioration, according to Medical Director Louis Schwartz and Acting Assistant Surgeon Leon H. Warren of the Office of Dermatoses Investigations, and Frederick H. Goldman, Associate Chemist, of the Public Health Service. The cream used in the experiments was slightly discolored, but still active after one month.

In the case of persons working where they might come in contact with poison ivy, the protective cream should be applied in the morning and allowed to remain on until the noon hour, when it should be removed by washing with soap and water; this will emulsify the vanishing cream in the pores of the skin and wash away whatever poison may be in the pores or on the skin.

The cream should be reapplied again after the lunch hour and again washed off in the evening when work is over.

These findings are based on results with a limited number of voluntary workers. Extensive field trials are in progress and will be reported later.

Infant Death Rate in the United States.—The lowest infant death rate in the nation's history was recorded in 1939, according to preliminary tabulations made public by the Census Bureau, Department of Commerce.

The 1939 infant death rate of 48.0 deaths per one thousand live births is based on 108,532 deaths of infants under one year of age. In 1938 there were 116,702 deaths which resulted in a rate of 51.0. The 1937 rate was 54.4 based on a total of 119,931 deaths. The record-breaking mark of 1939 represents the culmination of two decades of general decrease in infant mortality.

Decreases in the infant mortality rate in 1939, compared with the previous year, were reported by forty-two states and the District of Columbia. The rate for California in 1938 was 43.7; in 1939, was 42.2.

Syphilis and What to Do About It.—Under the title "Syphilis and What to Do About It," Dr. C. A. Walker, Chief Surgeon of the Southern Pacific Company, is distributing to employees an interesting twelve-page brochure concerning the disease. The foreword states:

Together with other leading industrial companies, the Southern Pacific is cooperating with public health authorities in the nation-wide effort now being made to stamp out syphilis. As a part of that effort this booklet is issued by the Hospital Department for the information of Southern Pacific employees.

Other excerpts are:

It is the purpose of our Hospital Department to cooperate in the campaign to stamp out this insidious disease, and in order to accomplish this it is ready to do all that it can to diagnose, classify, and give advice as to treatment to all employees. Every attempt is made to accomplish these results without interfering with the patient's employment and to provide treatment at a moderate cost which is within the financial ability of the patient.

The closing paragraph of the brochure states:

It is taken for granted that the diagnosis and treatment of syphilis among employees will be a matter of confidence between physician and patient.

Prepayment Hospitalization Service in Alameda County.—During the past six years some sixty cities and communities throughout the United States have developed some form of approved nonprofit health insurance covering hospitalization in an effort to anticipate and provide for the uncertainty of, and the financial burden imposed by illness. The scope and nature of the benefits available vary under the different plans, but for a very nominal sum individuals or family groups are entitled to three or four weeks of hospital service in any one year. The success of these efforts is emphasized by the fact that to date more than three and one-half million persons have enrolled under these plans and at the present rate of growth the membership may well exceed six million by the end of 1940.

There are three such approved plans operating in the State of California. One of these is the Alameda County Plan, known officially as the Insurance Association of Approved Hospitals, but whose corporate name will probably be changed to the Hospital Service of California. It has a membership of 30,000. This plan was organized three years ago under the sponsorship and financial backing of the Alameda County Medical Association and the Approved Hospitals of Alameda County. Under efficient management its growth has been steady, and up to April, 1940, there has been paid to hospitals for hospital service the sum of \$346,000. There is being established a surplus reserve, which now totals \$100,000. In addition, one-half of the \$25,000 originally advanced by members of the Alameda County Medical Association and by the Approved Hospitals of Alameda County has been refunded and at a recent meeting of the Board of Trustees of the Association action was taken to refund the balance.—President's Message, *Bulletin of Alameda County Medical Association*.

Pacific Association of Railway Surgeons.—The meeting of the Pacific Association of Railway Surgeons will be held in Reno, Friday and Saturday, September 20 and 21. Headquarters will be at the Riverside Hotel. Sessions will be held on Friday and Saturday mornings in the Nevada State Building. The banquet will be held on Saturday evening. Officers of the Association are: William L. Weber of Los Angeles, president; W. T. Cummins of San Francisco, secretary.

Doctor Brown Appointed Director.—Governor Olson has appointed Dr. Bertram P. Brown of Hollywood to succeed Dr. Walter M. Dickie as Director of the California State Department of Public Health. Doctor Brown is a graduate of the New York University Medical School and has been engaged in the active practice of medicine in Hollywood since 1920. Doctor Dickie served as Director of the State Department of Public Health since 1920, with the exception of the period 1931 to 1935. Doctor Brown assumed the duties of his new office on June 22, 1940.

American Board of Obstetrics and Gynecology.—The annual written examination and review of case histories (Part I) for Group B candidates will be held in various cities of the United States and Canada on Saturday, January 4, 1941, at 2 p. m. Candidates who successfully complete the Part I examinations proceed automatically to the Part II examinations held later in the year.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

Accidents from Fireworks.—Abandonment of the custom of shooting fireworks and other explosives on the Fourth of July is advocated as a patriotic duty in a statement issued recently by the National Society for the Prevention of Blindness. . . .

"Reports of serious fireworks accidents received by the American Medical Association from hospitals and clinics last year totaled 5,560. These included 158 major eye injuries, many of which resulted in total blindness.

"Nine states now have laws forbidding the sale or possession of fireworks, except for community displays under the supervision of pyrotechnic experts. Such a law was adopted in New York State this year, but it does not become effective until August 1. Other states which previously adopted fireworks legislation are New Jersey, Delaware, Pennsylvania, West Virginia, Indiana, Michigan, Iowa, and Utah. There is also some regulation of fireworks in Kentucky, Illinois, California and Wisconsin."

American Congress of Physical Therapy.—The nineteenth annual scientific and clinical session of the American Congress of Physical Therapy will be held on September 2 to 6, inclusive, at Hotel Statler, Cleveland, Ohio. This year there will be a departure from the usual arrangements in that the mornings will be devoted to an instructional seminar with the scientific program presented afternoons and evenings. This enables physicians to economize on time by attending both the instruction course and the annual convention during the same week. The entire instruction schedule is elective in character. Registrants may pursue only the individual courses they desire. The complete course consists of twelve lectures from a diversified list of forty-eight. The scientific program itself consists of papers, demonstrations and motion pictures covering every branch of physical therapy. There will be a separate scientific program covering eye, ear, nose and throat subjects. Write for schedule, fees, etc., to the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago, Illinois.

Los Angeles Health Building Plans Started.—The designing of a \$300,000 Student Health Service Building for the Los Angeles campus of the University of California will begin immediately, President Robert Gordon Sproul recently announced. Funds were appropriated by the regents from the reserve for buildings and improvements, on the recommendation of President Sproul.

The projected plan will provide a complete health service for the Los Angeles students, exclusive of hospitalization. The regents increased the incidental fee on the Los Angeles campus from \$23 to \$25 for the added service. Together with the \$4 Associated Student Body fee, total assessments will be raised from \$27 to \$29.

In his recommendation to the regents, President Sproul outlined the need for an expanded health service, pointing out that at the present time the limited health service available to a student body of about 8,500 is crowded into cramped quarters and operated by part-time employees.

The president said that on the basis of experience on the Berkeley campus, the health service would require a floor area of approximately 23,500 square feet. The building might be designed in such a manner that a bed-patient department could be added at a later date, should it be decided to include hospitalization.

The health program will combine men's and women's services, now separated, under one roof, increase the regular staff of attendants, expand the scope of services offered, and provide additional instruments and equipment needed to meet these requirements.

Press Clippings.—Some news items from the daily press on matters related to medical practice follow:

Change in Financial Rules of Hospital to Be Discussed
Proposal to Permit Patient to Have Assets of \$1,000 Without Lien Will Be Decided

Final discussion of the recent proposal to permit patients at the Los Angeles County General Hospital and other county institutions to have financial assets up to \$1,000 instead of \$250, without signing liens when services are rendered, will be held at 10 a. m. today in the office of Supervisor Gordon L. McDonough.

The conference today is being held prior to final submission of the proposal to the Board of Supervisors for action.

Those who are expected to be present at the meeting are: Members of the Board of Supervisors: Rex Thompson, county superintendent of charities; Dr. Edwin S. Bennett, superintendent, Los Angeles County General Hospital; Arthur Will, executive director, Olive View Sanatorium; William R. Harriman, superintendent, County Farm; S. K. Cochems, secretary, Los Angeles County Medical Association; Gardiner Bullis and Wendie Stuart, Council of Social Agencies; E. F. Hahn, foreman, and Nelson McCook, chairman, Charities and Health Committee, County Grand Jury; Gerald Kelly, County Counsel's Department; Wayne R. Allen, county manager; Paul Sheedy and William A. Pixley, representatives, Property Owners' Association of California.—Los Angeles Times, June 24.

Trade or Profession?

The refusal of the Supreme Court to take over the anti-trust case against the American Medical Association leaves, in effect, a lower court decision that the practice of medicine is a trade rather than a profession and as such is subject to the Sherman Act.

To most thinking people this will appear a disturbing situation. The healing art has commercial aspects, it is true; but this decision seems to ignore the others. Since in the Apex Hosiery case decided last week the court held, in effect, that the activities of labor unions are no concern of the Sherman Act if their primary purpose is not interference with commerce and the interference is merely incidental, this decision does not seem to grant to the American Medical Association even the privileges of a labor union.

For the primary purposes of the American Medical Association in moving against a group health organization in Washington was to preserve the standards of medical practice, and not the revenues of doctors. The decisions are difficult to reconcile.—Editorial, Los Angeles Times.

Survey on Medical Aid Available for Emergency Started.

In response to a request from the Surgeons-General of the Army, Navy, and Public Health Service, the American Medical Association has set its machinery in motion to secure information relative to the availability and qualifications of professional personnel for service in the federal preparedness program, it is announced in the *American Medical Association News*.

Irvin Abell, M. D., Louisville, Chairman of the Committee on Medical Preparedness of the Association, made an appeal for service addressed to the profession recently. Doctor Abell stated that the doctor, with a knowledge of the measures essential to the conservation of health, the prevention and cure of disease, is in a position to make a signal contribution to the success of the program.

Members of the Association are being contacted by letter, calling on physicians for the services they are best equipped to render.—Napa Journal, July 7.

Olson Appoints Two to Health Board

Sacramento, July 29 (AP).—Governor Olson today appointed Dr. Amos Christie, Berkeley, and Dr. Charles Smith, Stanford, as members of the State Board of Health to succeed Dr. Howard Morrow and Dr. William R. P. Clark, both of San Francisco, who resigned.

Doctors Morrow and Clark retired from the board in protest against the removal of headquarters from San Francisco to Los Angeles.—Los Angeles Times, July 30.

Physicians Plead in Trust Law Test

Washington, June 14 (UP).—Four medical societies and fifteen Washington physicians pleaded not guilty in United States District Court in the Government's test case charging that their opposition to a group health plan violated the Antitrust Law.

The individuals were indicted in December, 1938, along with the American Medical Association, the District of Columbia Medical Society, the Harris County (Texas), Medical Society, and the Washington (D. C.) Academy of Surgery.—San Francisco Chronicle, June 15.

Spreading a Good Idea

California followed the lead of other commonwealths in developing the idea of group hospitalization for dues-paying workers in business and industry, but it is out in front in the effort to make the program include complete medical and surgical care. It is the logical answer to a genuine human need at a time when Government meddlers in men's everyday affairs are talking Treasury-financed "state medicine" and greater tax exactions from employers and employees for various forms of health and accident insurance under the Social Security setup. It meets the problems, as Government, with its waste, inefficiency and ubiquitous politics, could never meet it.

The beginning was made last fall when the California Physicians' Service, under the leadership of President Wilbur of Stanford University, set out to give groups of employed people of small incomes the kind of medical attention they are not ordinarily able to afford, which is to say the best available. It was a dream come true for Doctor Wilbur, who visioned and crusaded for such a program fifteen years ago. The organization is on a nonprofit basis; the services rendered by its thousands of California physician members are to be had for a small monthly fee. A report just issued sets out that nearly 650 separate employee units are now enlisted in the movement, which shows what the public thinks of the plan.

Public health is a vitally important matter, and the wide extension of medical care and hospitalization under the group service plan is one of the most important contributions to it which this generation has seen.—Editorial, Los Angeles Times, July 7.

Government Medical Control Opposed by Physicians' Chief

New York, June 10.—Opposition to governmental control of medical care such as would be involved in compulsory health insurance was voiced here today at the opening of the ninety-first annual convention of the American Medical Association by Dr. Nathan B. Van Etten, the incoming president.

Doctor Van Etten warned the House of Delegates of the American Medical Association, which represents 115,000 physicians, against losing sight of the "dangers to medical practice through concentrations of federal authority."

Rapid development of voluntary health insurance, taken up by the organized medical profession as a preferable alternative to compulsory health insurance in a number of states, was reported here today to the convention.

Thirteen state medical societies of the American Medical

Association were named as having state-wide plans for low-cost medical care in effect or preparation. These state systems are designed to operate on the basis of budgeted prepayment of the medical expense of sickness.

Monthly cost per individual was indicated as running from \$1.50 to \$2.50.

California, the state in which the principal push for the compulsory system has been made, was the first where voluntary insurance was set up by a state medical society. The other twelve states listed today in the American Medical Association report are Colorado, Connecticut, Massachusetts, Michigan, Missouri, New Jersey, Pennsylvania, Utah, Vermont, Washington, New York, and Oregon. The District of Columbia was also included.

In some of these states the movement is still in its early stages.

The American Medical Association data also brought out that hospital insurance is now offered by 108 group hospital associations covering five million persons in twenty-eight states.

In rejecting compulsory health insurance, the American Medical Association has held that the need for low-cost medical care was far lower than pictured by propaganda for socialized medicine and that better ways of handling it could be found than compulsory insurance covering 90 to 100 per cent of the population.

Seeking to work out new methods, a large number of county medical societies, as well as state organizations, have been promoting experiments.—*Boston Christian Science Monitor*, June 11.

Compulsory Health Insurance Scored

Portland (Oregon), June 22 (INS).—The nation's 45,000 dentists are unalterably opposed to compulsory health insurance. Dr. Wilfred H. Robinson, Oakland, President-Elect of the American Dental Association, was on record today as advising delegates to the Oregon Dental Association convention.

He said the National Association approved setting up voluntary health insurance systems, however.—*San Francisco Examiner*, June 23.

LETTERS

Concerning Physicians Needed for Service in the United States Army.*

(COPY)

WAR DEPARTMENT
OFFICE OF THE SURGEON-GENERAL
WASHINGTON

July 12, 1940.

To the Editor:—With the likelihood of an augmented Army existing for a prolonged period, the War Department has been able to plan accordingly in considering medical personnel requirements.

In reference to extended active duty for Medical Corps Reserve officers, important changes have been made. Reserve officers may now serve in Hawaii, Panama, and other United States possessions, and may receive yearly extensions of active duty for an indefinite number of years until the international situation clarifies and until the future can be viewed with more certainty.

Inclosed is a statement pertaining to extended active duty for physicians which probably will be of interest to your readers. Any publicity given to the substance contained therein will be appreciated by this office.

Very truly yours,

(Signed): JAMES E. BAYLIS,
Colonel, Medical Corps, Executive Officer.

PHYSICIANS NEEDED FOR ARMY SERVICE

The physician, like every other American, has become actively interested in our national security and stands ready to contribute his services as required for military preparedness.

The immediate problem in this connection is one that concerns the War Department, and primarily the young physician. The War Department must procure sufficient additional personnel from the medical profession to aug-

ment the medical services of the Regular Army as the various increases are made in the strength of the Regular Army, as authorized by Congress to meet the partial emergency. The young physician is especially concerned because it is usually advantageous, and is often more convenient for him to serve with the Army.

Present plans of the War Department are designed to make service attractive and instructive for the young physician. If the physician holds a Medical Corps Reserve commission he can be ordered to active duty if he so requests. If he does not hold a commission, but is under thirty-five years of age and is a comparatively recent graduate of an accredited school, he may secure an appointment in the Medical Corps Reserve for the purpose of obtaining extended active duty for a period of one year or longer. Duty is given at General Hospitals, Station Hospitals, and with Tactical Units, and embraces all fields of general and specialized medicine and surgery. Excellent postgraduate training is obtainable in connection with Aviation Medicine. After serving six months of active duty in the continental United States, a Reserve officer may request duty in Hawaii, Panama, or other United States territories and possessions. The initial period for duty is for one year, and yearly extensions are obtainable thereafter until the international situation becomes more clarified and our domestic military program becomes stabilized.

Many young doctors who have served with the Army on extended active duty have taken the competitive examination for entrance into the Medical Corps of the Regular Army. Extended active duty affords an excellent opportunity for the physician to observe modern military medicine and the facilities that exist for a complete and comprehensive medical practice.

Pay is according to rank, and, including subsistence and quarters allowances for an officer with dependents, amounts to an annual sum of \$3,905 for a Captain and \$3,152 for a First Lieutenant; or, without dependents, to an annual sum of \$3,450 for a Captain and \$2,696 for a First Lieutenant. In addition, reimbursement is made for travel to duty station and return.

Further information may be obtained by writing to the Surgeon-General, United States Army, Washington, D. C.

Concerning American Medical Association Program on Medical Preparedness.

(COPY)

AMERICAN MEDICAL ASSOCIATION

Chicago, August 2, 1940.

Dr. George H. Kress,
San Francisco, California.

Dear Doctor:

I am enclosing copies of three resolutions adopted by the Committee on Medical Preparedness at its meeting held in Chicago on July 19. Copies of these resolutions have been forwarded to various government officials in Washington in accordance with instructions given by the committee.

In transmitting the resolution recommending that the National Defense Commission should provide funds to be expended under the direction of the United States Public Health Service for the training of physicians whose services may be needed in the field of industrial medicine, it was definitely pointed out that the recommendation offered in the resolution was intended to apply only to any period of emergency that may develop and not to apply after such emergency had ceased to exist.

The Committee on Medical Preparedness considers the resolution pertaining to the continuance of medical education and hospital operations to be of great importance, and it is my understanding that the various agencies of the government that are immediately concerned with the preparedness program have this matter in mind.

The committee also considers the resolution pertaining to the appointment of a coordinator for medical and public health services to be of great and most urgent importance.

Copies of these resolutions are being sent to all state chairmen of the Committee on Medical Preparedness, to the secretaries of the constituent state medical associations and to the members of the Committee on Medical Preparedness.

On inquiry I have received information from the office

* For editorial and other comment, see pages 53, 86, 87 and 90.

of the Surgeon General of the United States Army that the *age limit for physicians who may be called for military duty* will be fifty-five years. It is possible that the services of some physicians above the age of fifty-five may be used for special purposes, and it is my understanding that some physicians of an age less than fifty-five, including those in the lower age groups, may be assigned to duties concerned with service to civilian groups.

Very sincerely yours,
OLIN WEST, M. D.

RESOLUTION ADOPTED BY COMMITTEE ON MEDICAL
PREPAREDNESS OF AMERICAN MEDICAL
ASSOCIATION, JULY 19, 1940

WHEREAS, The maintenance of the health of the workers in industry is essential to the defense program of the country; and

WHEREAS, The prevention of unnecessary illness of workers in industry is necessary to insure uninterrupted production of essential materials; and

WHEREAS, There exists a shortage in the number of physicians, chemists, mechanical engineers and other professional groups skilled in industrial hygiene; therefore, be it

Resolved, That the Committee on Medical Preparedness of the American Medical Association recommends to the National Defense Commission that the necessary funds be furnished to the United States Public Health Service to provide the necessary training of physicians, chemists, mechanical engineers and other professional personnel in order to cope with the industrial hygiene problem in the present national emergency.

RESOLUTION ADOPTED BY COMMITTEE ON MEDICAL
PREPAREDNESS OF AMERICAN MEDICAL
ASSOCIATION, JULY 19, 1940

WHEREAS, The maintenance of the health of the nation is fundamental to its welfare; and

WHEREAS, The education and training of medical personnel requires long periods of time and special selection of men and women qualified to undertake such study; and

WHEREAS, It is necessary for such purposes to maintain continuous education of medical students; therefore, be it

Resolved, That the Committee on Medical Preparedness of the American Medical Association requests the National Defense Commission, the military and naval services, the United States Public Health Service and the Congress, in preparing for the conscription of personnel, to provide for the continuation of medical education and for exemption from conscription of all medical students and interns in accredited and approved institutions.

RESOLUTION ADOPTED BY COMMITTEE ON MEDICAL
PREPAREDNESS OF AMERICAN MEDICAL
ASSOCIATION, JULY 19, 1940

WHEREAS, There are many organizations interested in health and medical preparedness; and

WHEREAS, These organizations represent various specialties interested not only in the prevention but the treatment of disease; and

WHEREAS, Many recommendations and plans for medical preparedness will be made by these groups; therefore, be it

Resolved, By the Committee on Medical Preparedness of the American Medical Association that we recommend to the President of the United States and to the National Defense Commission the immediate appointment of a medical coordinator of the activities of all medical service related to the national defense program.

Concerning Acceptance in California of Oregon Laboratory Reports (Premarital Examinations).

(COPY)

OREGON STATE MEDICAL SOCIETY
Medical-Dental Building
Portland, Oregon
June 8, 1940

Dr. George H. Kress, Secretary
California Medical Association, Addressed

Dear Doctor Kress:

At the meeting of our Council on June 1, there was discussion concerning the policy of the California State

Board of Health under which it will only accept laboratory reports of syphilis tests in connection with applications for marriage licenses from the Hygienic Laboratory of the Oregon State Board of Health.

The effect of this policy is to prohibit private laboratories in Oregon from performing these tests for applicants for marriage licenses in California, and this in spite of the fact that these private laboratories have been approved by the Oregon State Board of Health to make these tests for applicants for marriage licenses in Oregon.

Our Council voted to request the Council of the California Medical Association to take up this matter with the California State Board of Health with a view to obtaining a change in this policy to permit the acceptance of laboratory reports in this connection from private laboratories which have received the approval of the Oregon State Board of Health.

We shall greatly appreciate it if you will present this matter to your Council at your earliest convenience.

With kindest personal regards, we are

Very sincerely yours,

OREGON STATE MEDICAL SOCIETY.

By CLYDE C. FOLEY,
Executive Secretary.

1 1 1

(COPY)

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
SACRAMENTO

San Francisco, California,
July, 9, 1940.

Mr. Clyde C. Foley, Executive Secretary
Oregon State Medical Association
Medico-Dental Building
Portland, Oregon

Dear Mr. Foley:

Your letter of June 8 to the California Medical Association has been referred to this office by Doctor Kress.

In checking our records we find that during the period from September 19, 1939, when the premarital law became effective, to June 30, 1940, only forty premarital tests were performed in Oregon for persons wishing to marry in California.

It is apparent that no great hardship is imposed upon the Oregon private laboratories because approximately five tests a month must be performed in the State Laboratory due to the California regulation.

The rule requiring that tests performed out of the state be run in state laboratories is in accordance with the regulations of most other states having similar laws. It is no reflection upon the competence of private laboratories in any state, but is necessitated by administrative procedure.

You can understand, I am sure, the confusion that would occur if California should make a single exception in the case of Oregon, and the impossibility of keeping the fifty-eight California County Clerks constantly advised as to the current list of private laboratories approved by the Oregon State Board of Health.

302 State Building.

Very truly yours,

MALCOLM H. MERRILL, M. D.,
Chief, Bureau of Venereal Diseases.

Concerning Pacific Coast Examination in Ophthalmology.

(COPY)

AMERICAN BOARD OF OPHTHALMOLOGY

Important Announcement

There will be only one written examination during 1941. This will be held in various cities throughout the country on March 8.

Candidates enrolled in the Preparatory Group who have been advised that they will be eligible for examination during 1941 should make application *at once* to take this written examination.

Application must be made on the regular blanks provided for the purpose and must be received in the Board office before December 1, 1940.

Oral Examinations, 1941: Cleveland, May or June, October (place to be announced later). (See P. S. below.)

Deadline for Case Reports: February 1.

An examination will also be held on the Pacific Coast during 1941, provided a sufficient number of candidates make application for this special examination. (File applications promptly.)

If you plan on taking your examination during 1941, please write at once to the Board office for formal application blanks, indicating your preference of examination place.

6830 Waterman Avenue,
St. Louis, Missouri.

AMERICAN BOARD OF OPHTHALMOLOGY.

Concerning California Nursing Practice Act.

THE CALIFORNIA STATE NURSES ASSOCIATION, INC.

San Francisco, July 16, 1940.

To the Editor:—The California State Nurses' Association has had requests from various organizations and individuals who were helpful in securing the passing of the Nursing Practice Act for information as to the working out of this legislation.

For this reason a communication of information is being sent by the Association to those interested.

As this legislation was given support and endorsement by a number of county medical societies, as well as by many individual physicians in California, it is felt that this communication of information could best reach them through your valued publication.

You will therefore find a copy enclosed which it is hoped you may be able to print in CALIFORNIA AND WESTERN MEDICINE.

609 Sutter Street.

With all good wishes, I am,

Sincerely yours,

(Signed): HARRIOTT L. P. FRIEND, R. N.,
Director at Headquarters.

1 1 1

Dear Friends:

You will be pleased to know that the Governor appointed a representative Board of Nurse Examiners. . . .

As soon as the bill was signed the Association began, through the district associations, to look up nonregistered nurses and assist them to become registered, in some cases organizing review classes, helping the nurses to obtain necessary forms, and lending books. As the State Association has forty-five district associations, it was possible to reach those nurses needing such help.

The Advisory Council which has been appointed had its first meeting on July 1, 1940. (Dr. Harry H. Wilson of Los Angeles and Dr. Charles A. Dukes of Oakland are the representatives thereon of the California Medical Association.)

It is our expectation that the Advisory Council will study the trends of nursing and advise ways and means of improving nursing in California. From what evidence we can gather, this law has been quite effective in preventing those who are not graduate nurses from practicing as such, now that the law protects the title "graduate nurse."

Persons may still care for the sick for hire without license, but may no longer impersonate a graduate nurse and deceive the patient employing, as well as overcharging for their services.

The law has not prevented qualified nurses from other states from coming into this state. From January 1 to June 21, 1940, the number of licenses to out-of-state nurses was 2,409, compared with a total of 1,781 for the whole year of 1939. There are also 32,153 registered nurses in the state who obtained registration in exchange of certificate between January 1 and June 21, 1940.

We have every reason to believe that the Nursing Practice Act is serving to protect the sick from exploitation in that it is now possible to ascertain whether or not the person employed is qualified by display of license. All possible publicity should be given to the fact that graduate nurses are required to be licensed as registered nurses and that license should be shown on demand of the patient, the physician, patient's friends, etc.

We believe that you may be assured that the Nursing Practice Act is a piece of legislation which is working to improve the public health of the state.

609 Sutter Street, San Francisco.

Cordially yours,

PAULINE W. GAGE, R. N.,
President, California State Nurses
Association, Inc.

Concerning California Medical Association Cancer Exhibit at the Golden Gate International Exposition.

(COPY)

GOLDEN GATE INTERNATIONAL EXPOSITION

San Francisco, July 4, 1940.

My dear Doctor Kress:

I was through the Hall of Science today and stopped to look at the Cancer Exhibit.

I have learned that it was through you and others associated with you that this very fine exhibit was made possible for the Exposition. I want to extend to you the sincere appreciation of the Exposition as a whole, as well as my personal thanks, for the interest which your group has taken in presenting a most interesting and unusual exhibit. You and the others should feel highly complimented on such a splendid portrayal of a most difficult subject.

Sincerely,

MARSHALL DILL, President.

Concerning an Error in Directory of Board of Medical Examiners of the State of California.

STATE OF CALIFORNIA

DEPARTMENT OF

PROFESSIONAL AND VOCATIONAL STANDARDS

BOARD OF MEDICAL EXAMINERS

San Francisco, California,

July 23, 1940.

Re: James C. Weld, M. D.

To the Editor:—Enclosed herewith please find a copy of a self-explanatory letter addressed to James Cushing Weld, M. D., and will greatly appreciate your publishing said letter in the next issue of CALIFORNIA AND WESTERN MEDICINE.

With kindest personal regards, believe me

Very truly yours,

(Signed): C. B. PINKHAM, M. D.,
Secretary-Treasurer.

(COPY)

San Francisco, California,
July 23, 1940.

James C. Weld, M. D.
1036 South Alvarado
Los Angeles, California

Dear Doctor:

I trust that you will accept the apology of the Board of Medical Examiners and the undersigned for inadvertently listing your name in the 1939 Annual Report as one whose license was revoked by the Board of Medical Examiners.

While it is true that the Board revoked your license at its July 1939 meeting, it is also true that on November 30, 1939, the Superior Court in and for the county of Los Angeles, in effect, set aside the Board's action and ordered your license restored without prejudice to the Board's right to pursue such other proceedings as might be proper in the premise.

Pursuant to the court's order, the Board at its regular meeting held in Los Angeles, February 26, 1940, annulled as of July 13, 1939, its former action and restored your medical license. You now are and at all times have been in good standing.

You will note by reference to the 1940 directory published by the Board of Medical Examiners that your name is *not* listed on page 10 thereof under the heading of "Penalty Imposed for Violations of . . . the Medical Practice Act." You will further note that your name is listed in the alphabetical section of said directory (page 136), as well as in the Los Angeles County listing on page 231 of said directory. Only licentiates in good standing are so listed. The failure to remove your name from the list of those disciplined by the Board was purely an oversight.

I am today forwarding a copy of this letter to George H. Kress, M. D., Editor of CALIFORNIA AND WESTERN MEDICINE (official journal of the California Medical Association) with the request that he publish same in the next issue of that journal.

I trust the oversight referred to herein has not caused you any embarrassment.

With kindest personal regards, believe me

Very truly yours,

C. B. PINKHAM, M. D.,
Secretary-Treasurer.

MEDICAL JURISPRUDENCE†

By HARTLEY F. PEART, ESQ.
San Francisco

Responsibility of One Physician for Malpractice by Another

Although generally a physician may be held liable only for his own acts and may with safety call in another physician to aid him in a particular case without accepting responsibility for negligence of such other physician, there are certain situations in which a physician is responsible for the acts of other persons and these should be constantly kept in mind.

Employees.—With few exceptions, a physician is liable for negligence of his assistant, apprentice, agent or employee. The failure of a nurse to remove a sponge from a patient's abdomen or other situs of an operation, is typical of this source of liability. Where it can be shown that the nurse was an employee or assistant of the operating surgeon, the surgeon may be held liable. However, since there are circumstances in which the hospital, rather than the surgeon, is responsible, reference is made to a more detailed discussion of this question, to be found in the Medical Jurisprudence article in the April, 1937, issue of this publication. The important factor in establishing this type of liability is the control which one is presumed to

exert over persons who stand in an employee relationship to him.

Nurse or Attendant Not an Employee.—Since it is a matter of common knowledge that it is customary in many hospitals for the operating surgeon to leave the post-operation care of patients, in the matter of dressing, packing and unpacking wounds, to the house doctor (interne) and staff nurses, the surgeon is not responsible for the negligence of such persons unless it is shown that the hospital was owned by the doctor or he had some other peculiar control over such assistants.

Physicians Called in to Help; Consultants.—It may be stated that generally one physician may with impunity call in another physician to assist him so long as he uses due care in the selection of that physician. He may select anyone whose professional standing in the locality is good and who is experienced in that particular line of practice. Thus, in a case where it appeared that the patient was under the general treatment of one physician but another physician of good standing was called in to diagnose the disease and prescribe or direct treatment for its cure, in an action for malpractice against both physicians, it was held that the one who was specially employed by the patient should only be liable for such damages as resulted from his connection with the case on the occasion of his visit, and that he was not liable for what the other physician did or omitted to do in his absence.

Substitute.—A physician, due to other calls, is often required to send a substitute to treat a patient. Just as in the case where a second physician is called in to help, the first physician's liability depends upon the care which has been used in the selection of the substitute. If reasonable care has been exerted, there is no liability.

Two or More Physicians Engaged Independently.—The courts have stated the rule applicable to this situation as follows:

Each, in serving with the other, is rightly held answerable for his own conduct, and as well for all the wrongful acts or omissions of the other, . . . which in the exercise of reasonable diligence under the circumstances, he should have observed.

Thus, it may be seen that where there are two physicians on the case, both hired by the patient independent of the other, each has the duty of exercising due care toward the patient and neither can permit the other to do a wrongful act under his own observation. Added to this may be a responsibility for each other where they are acting jointly in a particular endeavor such as an operation or specific act of treatment. In such case, each is held liable for the acts of the other. It has been held, however, that where a physician could have taken no part in an operation other than in administering the anesthetic, he could not be liable for the negligence of the operating surgeon since the two were not acting jointly in the operation.

Where One Physician Contributes to an Injury Caused by Another.—Generally, one may not be excused from one wrongful act merely because another was also involved in a similar wrongful act. Thus, where a physician's treatment of the plaintiff was negligent from the start, the fact that another physician subsequently had exclusive control of the case will not relieve the defendant of his negligence while he was in attendance. Sometimes it is not easy to establish which of one or more surgeons or physicians actually caused an injury. In such case, if the physicians or surgeons were giving joint treatment, each is liable for any injury which may result. Thus, where a family physician recommended a surgeon to perform an operation, at which he was present and assisted, although not personally using the knife, he was held to be jointly liable because both doctors were considered as joint tortfeasors.

†Editor's Note.—This department of CALIFORNIA AND WESTERN MEDICINE, presenting copy submitted by Hartley F. Peart, Esq., will contain excerpts from and syllabi of recent decisions and analyses of legal points and procedures of interest to the profession.

TWENTY-FIVE YEARS AGO†

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. XIII, No. 8, August, 1915

From Some Editorial Notes:

California and the American Medical Association.—Probably nearly 50 per cent of the members of our State Society attended the sessions of the American Medical Association held in San Francisco in June. Up to the time of closing the registration on Wednesday night, for publication in the last Bulletin which was issued Thursday, 1,064 of our members had registered. A good many registered on Thursday though the exact count could not be obtained on account of the hurry and pressure of closing things up. That is a mighty good showing, as we think you will admit. . . .

Remember Your Friends.—There was a time, not so many years ago, when no respectable publication would refer to its advertisements or its advertisers. To be sure, many items boosting advertised things appeared in some periodicals—mostly medical (?) journals—but these were what is known as of the "reading notice" variety; carefully prepared by the advertiser and furnished to the publication; they were run as part of the advertising obligation. Now, however, and largely through the influence of your own Journal, all that has changed; we are proud of our advertisers and our advertising. Nothing goes into the advertising pages that is not as carefully scrutinized as the matter that goes into the reading pages. . . . Help your friends and those who help you. Read the advertisements in this issue.

Progress or Retrogression?—The new way of spelling "progress" and "reform" seems to be "politics" and "retrogression." Cheap politics mixed into medicine makes a pitiful mess, and especially when it comes to public health matters; for the people understand the importance of, to them little things, so not at all! . . .

Healthy Growth in California.—Every three years, according to the by-laws, the House of Delegates of the American Medical Association appoints a committee on reapportionment, which committee goes over the membership returns of the several state associations and determines the number of delegates which each state shall have for the next succeeding three years. This was the year of reapportionment, and the report of the committee made but two changes; California was given one more delegate, so for the next three years we shall have four delegates and not three, as previously. . . .

Good Legislators—And Others.—It has reached the attention of the Journal that some members of the last legislature who stood for better medical legislation have felt somewhat disturbed or annoyed because of our mild criticism of the net result of legislative effort. . . .

There is no good reason why we, as a profession and as an organized profession, should go to the legislature and beg for anything. We do not need protection, but the people do. If it is the wish and the will of certain legislators to remove the protection which just medical laws and high standards for medical licensure give to the people of the

(Continued in Front Advertising Section, Page 5)

† This column strives to mirror the work and aims of colleagues who bore the brunt of Association activities some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By CHARLES B. PINKHAM, M. D.
Secretary-Treasurer

Board Proceedings

A regular meeting of the Board of Medical Examiners was held in Native Sons Hall, San Francisco, June 24 to 27, 1940.

One hundred ninety-two applicants wrote the examination, including physicians and surgeons, drugless practitioners, and chiropractors. A number of foreign émigré physicians who had completed the required one-year internship and satisfied the requirements of the California law were also included.

Seventeen licensed physicians and surgeons were on the calendar for hearing.

The licenses of Walter Hoyt, M. D., Gridley, and Theodosia Maude Ramer, M. D., San Diego, were revoked, based upon charges of alleged illegal operation.

Edith Mary Stoker was placed on probation for a period of three years, based upon conviction of a crime involving moral turpitude.

After hearing the evidence in the case of Nathan Housman, M. D., the Board voted the evidence was not sufficient to sustain the allegations in the complaint, and pending charges were dismissed.

On June 24, 1940, the Board restored the midwife license of Caterina Reorda (revoked on June 30, 1937) and she was placed on probation for a period of five years.

News

"Mobilization of the nation's physicians for service in time of war is being carried out swiftly under a program launched by the Surgeons-General of the Army and Navy, it was learned here last night. Every registered physician is getting a questionnaire in which he is asked to report his age, qualifications, and type of work desired in case of national emergency. The questionnaire is being carried [sent] out by the American Medical Association, and is expected, when completed, to furnish the military chiefs with a complete and detailed index of the nation's available resources in medical personnel. When this phase is completed, the organization program will be carried through to the end that, should war be declared, the entire medical branch of the service could be mobilized and set in operation on a few hours' notice." (San Francisco Examiner, June 20, 1940.)

"Two of Stanford's School of Medicine staff, whose combined length of service to the University is fifty-five years, will retire from active teaching posts in less than two weeks. They are Doctors Edward Sewall and Harvard McNaught. Both men, experts in eye, ear, nose and throat work, have been attached to the school for the medical students in Stanford Hospital in San Francisco. . . ." (Palo Alto Times, June 4, 1940.)

"Dr. Elmer Belt of Los Angeles and Dr. Francis Marion Pottenger of Monrovia were appointed members of the State Board of Health by Governor Olson today. Doctor Belt, attending physician at the Children's and other hospitals in Los Angeles, succeeds Gustave Wilson of Sacramento, whose term expired last January 15. He will serve

(Continued in Front Advertising Section, Page 11)

† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.